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COUNTY AGENT VO-AG TEACHER

THE LEADING MAGAZINE FOR AGRICULTURAL LEADERS

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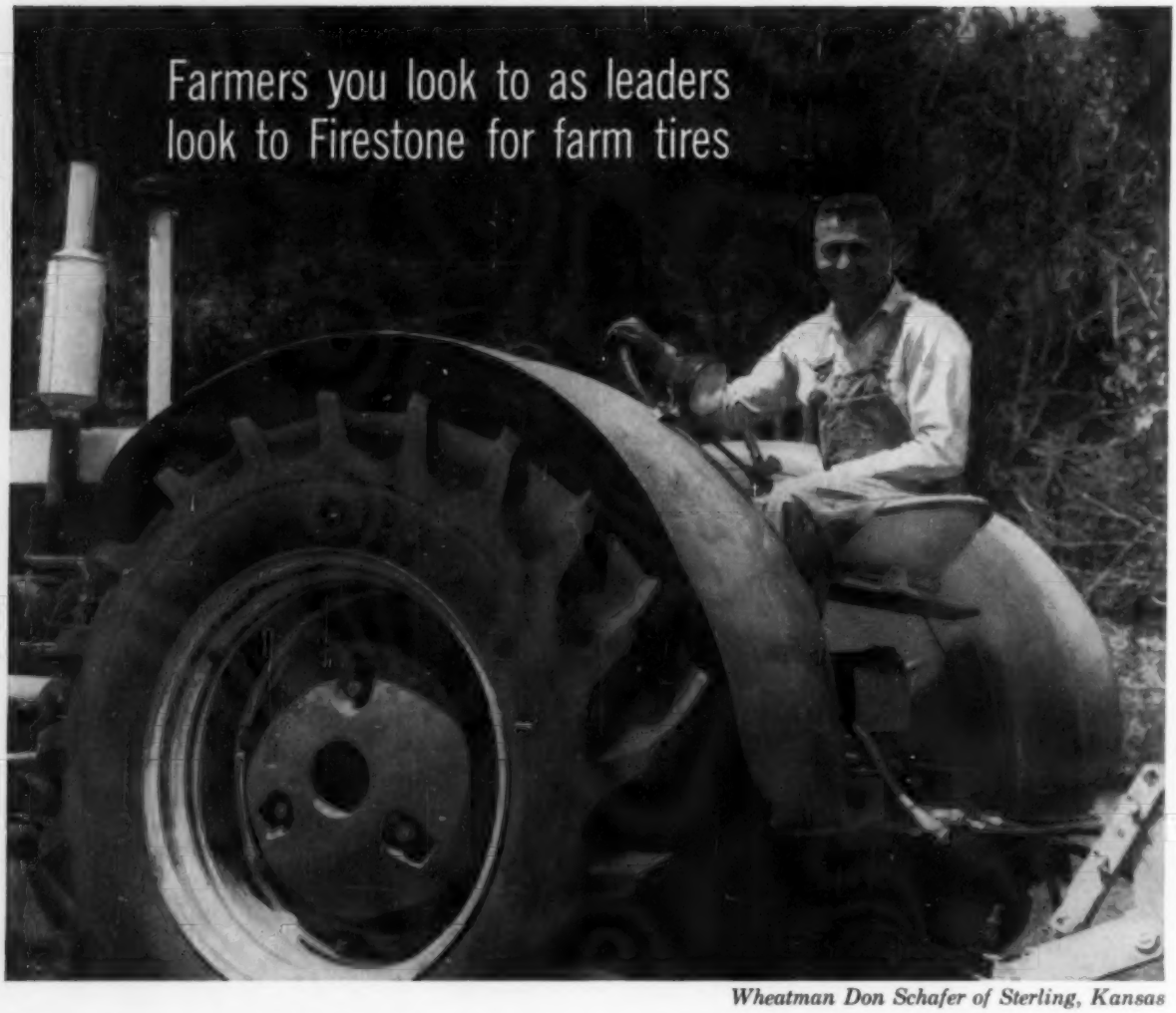
CURRENT SERIAL RECORDS

"Gimmicks" promote soil-water conservation

County Agent Crystal: "Grassroots Will Rogers"

Irrigation gets a boost from Extension

F. E. Mohrhardt
Departmental Admnts.
U. S. Dept. of Agriculture
Washington 25, D.C. USDA



Wheatman Don Schafer of Sterling, Kansas

Kansas began earning her "Wheat State" reputation in 1874—when a variety of wheat called Turkey Red was introduced. This hardy, drought-resistant grain grew so well in Kansas that wheat production soon ran far ahead of record yields of "old king corn."

Since that time Kansas wheatmen have constantly developed new methods in increasing yields per acre. Around Sterling, in Rice County, Don Schafer is respected as a grower who consistently makes modern techniques pay off. Don's neighbors match his pace, too, in using the latest equipment—including the Firestone tires he uses exclusively.

Don reported: "I've used Firestone tires for years. Frankly, I can't beat them for wear and toughness. When you get good tires and service, you're smart to stay with them."

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His hog records show

feed cost $7.48 per 100 pounds pork

"MoorMan's Mintrates* and corn consistently produce low-cost pork on my farm," says Alvin Ortgies, Jones County, Iowa. "I market 300-350 hogs a year and raise 'em all on MoorMan's.

"Records on my last bunch of 112 hogs show my feed cost to produce 100 lbs of pork was $7.48. Of this, only $2.39 was out-of-pocket cost for MoorMan's. I figured my corn at $1.12 per bushel."

Return for corn— $2.72 per bushel

"These hogs averaged 216 lbs at market and consumed 68,500 lbs of feed," continues Mr. Ortgies. "So it took only 2.85 lbs of feed for each pound of pork marketed.

"Looking at it another way, figuring hogs at $15, MoorMan's Mintrates helped me get back $2.72 for each bushel of corn fed."

Mr. Ortgies' figures, of course, do not include the value of the sows' milk or the cost of the sows' feed. Cost of sows' feed figures about $3 per pig, breeding to weaning, based on a 9-pig litter average.

Feed cost records are valuable "tools"

An important word in Mr. Ortgies' statement is "records." They are "tools" he uses to determine profit or loss on his pork operation. Not only are his records of feed costs important; so are his records of breeding and management practices, which serve as guides to future operations.

On the 1280 acre MoorMan Research Farms, last year, records of feed consumption and gain were kept on over 2000 hogs to help develop feeds to give better yields and faster gains.

A sharp pencil and well kept records can be valuable to you, too. Only by keeping complete records of your feeding operations can you determine *which* feeds help you get the most pork and the fastest gains for *your* feed dollars.

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COUNTY AGENT VO-AG TEACHER

MAY 1961
Vol. 17 No. 5

THE LEADING MAGAZINE FOR AGRICULTURAL LEADERS

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E. G. K. MEISTER, *Publisher*
GORDON L. BERG, *Editor*; R. T. MEISTER, *Editorial Director*
Associate Editors: PHYLLIS MARRON, DOROTHY KAPLE
Washington Editor: JOHN HARMS; *Farm Mechanics Editor*: HAROLD GULVIN
Audio-Visual Editor: GEO. F. JOHNSON; *Production Manager*: J. S. BENDER
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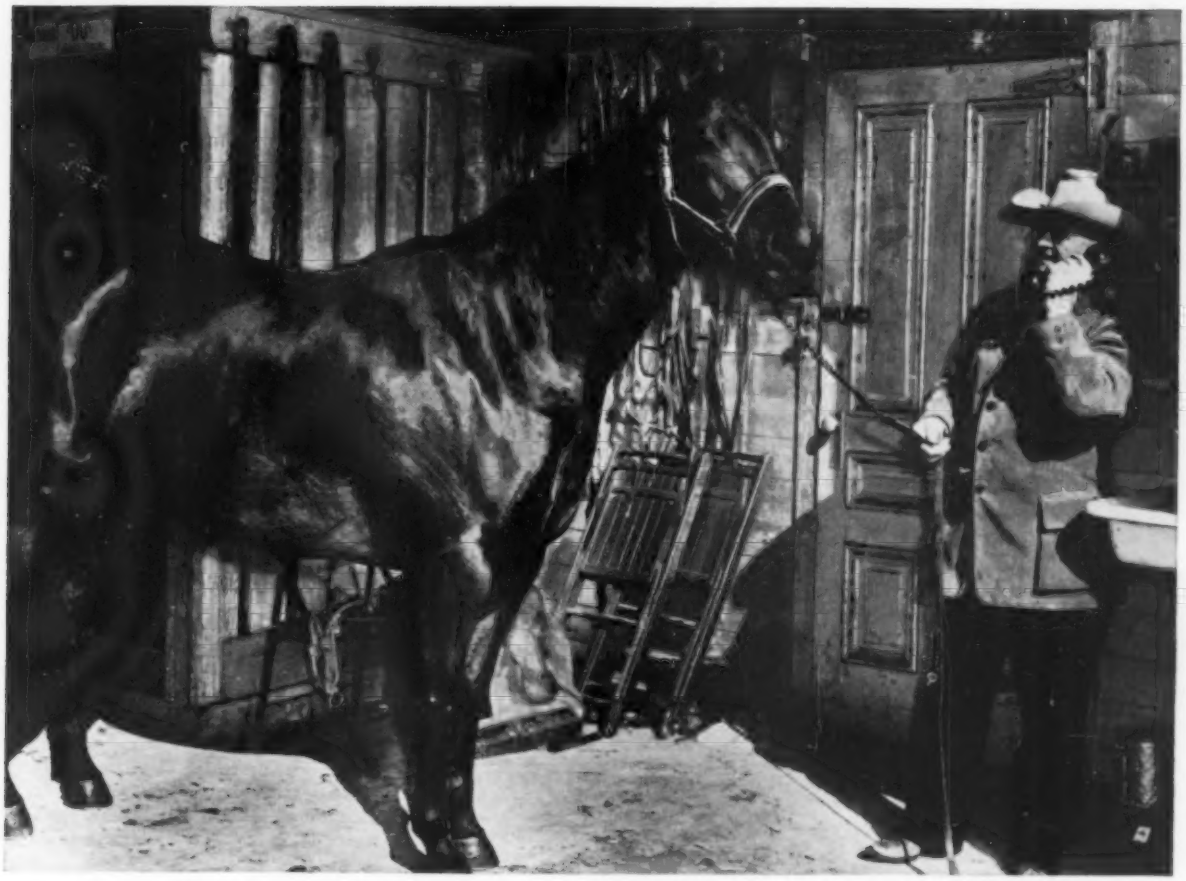

"I don't even have to let go of a horse to handle a call"

Loyd Jinkins is a name that needs no explaining to men who know quarter horses. A visit to his home near Ft. Worth would show you why. It's hard to find a place to put your hat unless you want to hang it on a grand champion trophy.

To Loyd raising and training quarter horses is not only his greatest pleasure—it's a thriving business too. That's why he has a complete extension telephone setup in his buildings. With these handily located phones, he's on tap every working hour to the folks he does business with.

Before Loyd had his extensions he was walking almost a mile a day to and from the house to handle calls. This interrupted his duties around the buildings and corrals where he has six men working fifty head of registered quarter horses. It was costing better than an hour a day.

Now, with an extension phone in the bunkhouse, saddle shed, and shop, Loyd is seldom more than a few steps from a phone. As he puts it, "I don't even have to let go of a horse to handle a call."

All over the country, in all types of farming and ranching, busy men are using extension phones to save time and keep tight control of their operations. Today there are few tools that return so much for so little.

Why not have a look around your place and see how much of your time extension telephones would save? Then call your Bell Telephone Business Office. You'll be surprised when you find out how little they cost.

BELL TELEPHONE SYSTEM

ag leaders speak up

"IMMUNIZATION" VS. INJECTION

Your eye-catching lead for your article entitled "Scanning the Livestock and Poultry Scene" in the March 1961 issue reads "Immunization Instead of Antibiotics to Stimulate Growth?" We must confess a let down feeling to observe as we read further that the topic under discussion was actually the injection of a drug and not immunization proper.

While such a differentiation may seem a technicality to you, we should point out perhaps that the bulk of your agricultural readers, including county agents, Vo-Ag teachers and farmers will automatically associate the word immunization with protection against a specific disease. Actually the injection of pure urease is no more comparable to immunization than is the implanting of stilbestrol pellets.

It was still a good lead line however.

G. M. MERRIMAN
Veterinarian
Dept. Animal Husbandry & Veterinary Science,
The University of Tennessee
Knoxville, Tennessee

I appreciate your letter of March 10th. I guess about the best way I can answer this without getting off on a long discourse is to suggest that you write to the University of Chicago for a copy of the December 1960 issue of Chicago Reports. The address is as follows:

Office of Public Relations
5801 Ellis Avenue
Chicago 37, Illinois

The writers of this outstanding publication are Bruce Rattenbury and Sanders Rosenblum. I'd like to quote just one part here for you: "Dr. Visek's work began with an investigation of how antibiotics when added to livestock feed helped the animal grow. He found out that these drugs attacked the hundreds of kinds of bacteria that produced the enzyme Urease. Exploring further, he discovered that Urease has a growth-control function—the less Urease, the more growth—within limits, of course."

Rather than indirect control through inhibiting the bacteria with modern drugs, Dr. Visek wondered whether a more direct mechanism could be devised. Such a direct approach would call upon the body to provide a mechanism to check the effects of Urease. The research was directed along the same course that has led to the medical miracle of vaccination against disease: the immunization process in which the body is stimulated to produce antibodies to fight off invading toxins.—EDITOR.

WEEKEND IN CONNECTICUT

On behalf of the dedication committee and the FFA Chapter here at Lyman Hall High School, I wish to thank you for coming to Connecticut and taking part in the dedication of our Regional Vocational Agricultural Center. You gave a splendid talk and I am sure that some eyes were opened.

I was very pleased to have had the opportunity to spend Saturday evening talking with you. I hope that we will have other occasions to converse together in the future. I think that our philosophy in Vo-Ag in Wallingford is very similar to yours.

ARTHUR SHERWOOD
Vo-Ag Teacher
Regional Vocational Agricultural Center
Wallingford, Conn.

TECHNICAL HELP NEEDED!

Your editorial in the March issue of COUNTY AGENT & VO-AG TEACHER deserves careful consideration by readers of your magazine. I am sure you know that what you are suggesting is contrary to the trend in academic circles today. For sometime I have been concerned that technical training is being deemphasized for extension workers and teachers of vocational agriculture. It appears to me that, in this highly competitive age in which farmers find themselves, they are going to demand more technical proficiency on the part of those who contact them. This applies also to representatives of the various agri-business which supply the farmer with his needs. As farming becomes more specialized and highly capitalized, it seems inevitable that the agricultural workers who render this service are going to need to be highly technically trained.

HOWARD T. ROGERS
Head
Agronomy and Soils
Auburn University
Auburn, Alabama

ANSWERING SERVICE TIPS

I've been on the COUNTY AGENT & VO-AG TEACHER list, or it's been available to me for the better part of eight years now. Thanks.

Somewhere in that length of time I read about some county or state extension offices—in the East, I think—using an answering service for special problems to get around the manpower problem.

I am anxious to get in touch with agents who have experience along this line. Or if your files have those copies pertaining to answering services, I'd appreciate hearing from you or having thermofaxed copies of such stories. Thanks for your help.

J. J. FEIGHT
Assistant Extension Editor
University of Illinois
Urbana, Illinois

Good hearing from you again! If you check the July 1959 issue, page 30, you'll find a reference in Audio-Visual Quiz to the automatic message telephone in the Montgomery county, Pennsylvania, extension office that was answering 400 calls daily for timely tips on lawns, shrubs, flowers, trees and vegetables. The mechanism was installed in mid-March of 1959 at a cost of $15, and a rental charge of $10 a month plus the cost of an additional telephone line.

"While it is the first of its type in Pennsylvania," reported George Johnson, "the device is in successful use in the New York City and Boston areas, according to M. R. Deppen, Montgomery county agent." I'd suggest you contact Howard Campbell, county agent at Mineola, New York, Charles W. Turner, Worcester, Mass., and M. R. Deppen, county agent at Norristown, Pennsylvania.—EDITOR.

HERBICIDE REPORT QUERY

In your February 1961 issue an article, "1961 Herbicide Report" on page 45 "Clearance for Avadex," it states that this herbicide controls "wild oats." The question I have is this wild oats *Avena Fatua L.?* Will this herbicide also control *Bromus Joponicus Thumb?* We have a lot of *Bromus Japonicus* in our stubble mulching and are very interested in a herbicide that will control this in wheat.

LEO C. WEINHOLD
Work Unit Conservationist
Soil Conservation Service
Phillipsburg, Kansas

The answer is "no" according to the Agricultural Chemicals Division, Monsanto Chemical Company 800 North Lindbergh Blvd., St. Louis, Missouri.—EDITOR.

QUESTION of the month

Q. How will farm organizations fare under the Freeman program?

A. General farm organizations, which have been something less than howling successes in getting the kind of farm programs required by modern agriculture adopted by the government, stand to lose even more influence in Washington. Grange, Farm Bureau and Farmers Union—all are increasingly on the spot as Secretary Freeman's ideas go into operation.

Here's how: Freeman is determined to obtain authority permitting farmers to select commodity advisory committees to advise the USDA on programs for particular commodities. If a commodity gets into price difficulty, a group of farmers producing that commodity would be elected to help work out a program. The developed program then would be put to a vote of the farmers producing that commodity for approval or disapproval. After that, if approved, Congress would have a look at the program—change it, approve it, or kill it.

But nowhere along the line is there a place for the general farm organizations—except where they might bring pressure to bear on the USDA or Congress. But this may not amount to much since USDA could always say: This is what the farmer himself wants—he voted for it.

The Freeman approach seems to be a reflection of growing farmer dissatisfaction with general farm organizations, their inability to get anything solid accomplished in Washington, their frequent bickering, and failure to accurately reflect farm opinion in their national policies.—JOHN HARMS.

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Histostat®-50 still prevents blackhead best

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Every year, for ten years now, more and more turkeys have been raised on feed containing Dr. Salsbury's Histostat-50. Why? Because growers have found that Histostat-50 consistently protects their flocks against mortality and weight loss from blackhead. That's reason enough, because this kind of disease prevention is their best assurance of strong, healthy birds, the kind that are necessary to profit.

And, also, test after test at experiment stations have given similar results: *Histostat-50 prevents blackhead best.* So advise growers not to take chances with turkey profits. Suggest that they have Histostat-50 mixed in the ration when birds go on range (earlier, if they've had trouble with blackhead in the brooder house) and feed it continuously. Remember—growers can't make any money on dead birds!

WRITE FOR COMPLETE INFORMATION ABOUT HISTOSTAT-50, THE NATION'S NO. 1 BLACKHEAD PREVENTIVE. YOU CAN USE OR RECOMMEND IT WITH COMPLETE CONFIDENCE!

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Charles City, Iowa, U.S.A.

MORE THAN PRODUCTS—A SYMBOL OF SERVICE

ag leaders Washington

By JOHN HARMS

Latest word from the Capitol—

Our bet is that farmers will "go along"—and make the most of it.

ANOTHER BATTLE OF WITS between the federal government and the farmers now is getting underway with a vengeance. The government is desperately trying to hold the line on feed grain production with its new program, and farmers — although generally sympathetic — are desperately trying to figure out how to make money on the program, and beat it if possible.

The Agriculture Department, with its national view, is bound to try to get some order out of a bad situation — still, it can hardly accomplish this by appealing to farmers to succumb to a program strictly on the basis of the national well-being.

If we were to bet on who will get the most out of the feed grain program — government or farmers — we'd have to bet on the farmers. They've learned how to beat the game over the years.

This is not to say that farmers won't "co-operate" and sign up for the program. We think they will get into the program in great numbers — perhaps up to the 50% or 60% of the total corn land area which USDA thinks will be signed up. But once in the program, indications are that farmers will pour on the fertilizer and set a new record high of corn — and milo — production per acre. If, that is, weather cooperates.

Here's the way we size up the program at this early stage: Based on 50%-60% participation, USDA figures corn production would be about 3.8 billion bushels this year — compared with about 4½ billion under last year's setup. That would be a sizeable drop — if it happened, and we don't think it will.

If farmers actually take 10-12 million acres out of corn production this year, this would reduce total production 500-600 million bushels. On the other hand, if the average yield per acre is boosted 10 bushels on the remaining 70 million acres in corn, total production actually would be in the neighborhood of 4½ billion bushels. A national average increase of 10 bushels in yield is not out of the question, primarily since farmers in the program would keep their most productive land under cultivation. An increase of only 5 bushels in the national yield would bring corn production well above the 4 billion-bushel mark — which doesn't speak well for the program either.

The key to why farmers will beat the program by boosting yield on retained acres, of course, is the general principle that most farmers can spend a few extra dollars on more fertilizer and still make profits from increased number of bushels even though they may have to take a lower price. Thus, a cooperating farmer can get the support price — national average of $1.20 a bushel — and get the market price for the extra bushels. USDA says it will try to keep the market price at about $1 for the 1961 crop. This, in most cases, is considerably higher than the cost of producing the extra bushels.

KENNEDY IS PUSHING his omnibus farm bill in Congress on two very telling fronts — a combination which has proved successful in the past: (1) He is trying to make it appeal to the city vote, which, in the final analysis, will be the vote that puts it across or defeats it, and (2) he is trying for a broad base of support from all elements of agriculture. There is little question that his request for letting farmers themselves help draw up and decide on new programs is an attractive one to farmers.

There are two obstacles, however, that will prove very difficult to overcome: (1) The fact that Congress does not want to delegate more authority to the Secretary of Agriculture than he now has, and (2) opposition from interests which fear that more farmer control over programs may endanger "the American way of life", — or endanger their business interests.

PASTURE

cuts dairy feeding costs by 2/3

New Jersey experiments show that pasture for dairy cattle cuts costs to less than a third those of straight grain and roughage feeding. Lower feed cost is just one reason why many farmers are looking to pasture for extra profits. Other examples of pasture benefits:

Saving in labor—Each man-hour spent in pasture production returned $23 in North Carolina experiments, compared with less than $4 for corn and less than $6 for wheat.

Water conservation—Missouri tests show that four times as much water was lost from sloping cornfields as from alfalfa on the same plots.

Reduction in equipment expense—Pasturing livestock eliminates the need for much expensive machinery and equipment.

Erosion control—Missouri researchers report 400 times the soil loss from sloping cornfields as when the same land was planted to alfalfa.

Wide management choice—Pasture can also be cut for hay, grass silage or seed if needs dictate a change.

Many research reports from across the nation cite the advantages of renovated permanent pastures or improved pastures in a crop rotation scheme. Pasture lands often produce more total digestible nutrients than the same land in grain—and at far less cost.

We'd like to send you a new, free book, *Pasture—How to Reduce Feed Costs.* This book reports many research studies which show how livestock feeding on pasture gives extra profits. Further than that, the book tells how to renovate pasture. It describes methods for lengthening the pasture season, grazing techniques and recommended forage varieties for every section of the country. It's chock full of information which every farmer or potential farmer will value. You can use it for speeches, group topics, discussions or just reference. Why not send for your free copy today?

Please send me the new, free book,
Pasture—How to Reduce Feed Costs.
Keystone Steel & Wire Company, Dept. CAV-51
Peoria 7, Illinois

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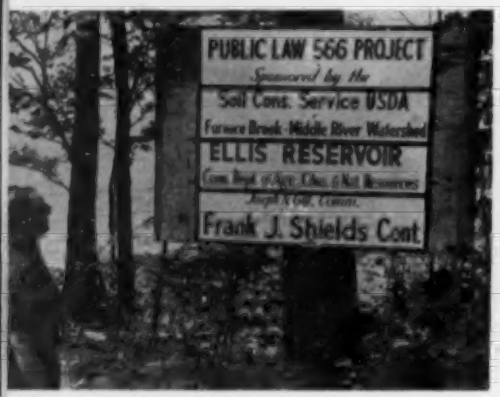

Roadside signs identify conservation projects to give local travelers a better idea of otherwise unidentified improvements.

Amateur art work on 35mm frosted glass slides pepped up slide talks before school and other groups, claims an SCSer in New Hampshire.

Tricked-up aerial photo of a watershed can make an interesting illustration for a post card.

'GIMMICKS'

attract attention for soil and water conservation

By GORDON S. SMITH

OUR bulging population with its growing pressure on soil and water resources is making conservation a subject of interest and concern to city folks as well as rural land owners.

Don Williams, administrator for the U. S. Soil Conservation Service, summed up the situation recently in a speech when he said, "Non-farm beneficiaries of soil and water conservation and watershed protection, today, outnumber farm and ranch people by nine to one. The ratio apparently is widening year by year."

To keep pace with this change in audience, U. S. Soil Conservation Service technicians, working with Soil Conservation Districts and other conservation groups, are using old ideas with new "gimmick" angles to attract the attention of these city folks as well as farmers.

Here are some of the ideas that have proven successful in various parts of the country.

Reflecting Bumper Placards—A brief message with watershed flood protection project name in bold letters, printed on 5x10-inch scotch-light, gum-backed stock, proved useful to one watershed association. Five hundred placards were placed on car bumpers in the area. The placards aroused curiosity and the project was soon front-page news.

Place Mats—SCD supervisors in a New York county had 5,000 place mats printed to advertise a watershed project. The same format and message was used on all mats but there were five variations in the cartoon illustrations. The mats were used at local, civic dinners, church suppers, service clubs and garden clubs. The variation of cartoons always created discussions at the gatherings and made the project a topic of interest to all. One definite result of this interest was the donation of 4x8 foot plywood color map of the watershed project by one of the local civic clubs that had used the mats.

Post Cards—Pictorial conservation photos or tricked-up aerial watershed photo-maps have made eye-catching illustrations for black and white or color post cards. Using the local SCD or watershed project name on the picture side and a brief paragraph on the message side, cards give wide publicity for a low cost. Even color cards cost less than $100 for 5,000 reproductions.

Picture Calendars—Conservation photos with a minimum of text and a short advertising plug on a calendar keeps the name before the public everyday all year long. One Maine SCDistrict has used this idea with great success for years. Calendars are made in any effective size from deluxe wall size to desk top or wallet card.

Rubber Stamp—A short slogan or symbolic imprint stamp on all outgoing mail and literature has done wonders for getting a watershed project or conservation efforts before the people. Again, the cost is small and the coverage great.

Cartoon-styled Mailing Pieces—Advertising literature floods the mail but one SCD found that a few extra dollars spent on cartoon illustrations made their mailing piece interesting enough to get attention. A short watershed project message with the cartoons spread through the text proved a successful, low-cost project.

Do-It-Yourself Tour Maps—By adding an interesting tour layout to a county road map, one SCSer found he could make an interesting news feature and, at the same time, cut down his tour-guide time. The tour covered conservation scenes and problems, watershed improvements, historic spots and picnic areas. The illustrated story had wide appeal in the papers. Reprints were handy for future tour groups.

Membership Placards—A New York watershed association had inexpensive placards printed and given to all members of the association. As the signs appeared on fence posts, barn doors and front windows, the passing public became curious. Interest spread fast.

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Willoughby, Ohio

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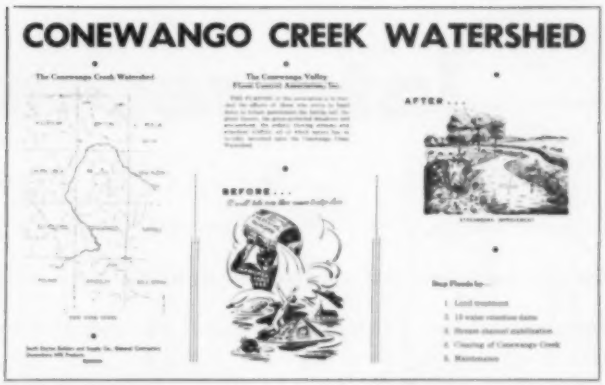
This Card Void After July, 1961

Window shade visuals have made ideal visuals for a Connecticut watershed project. They're used in meetings and on TV.


CONEWANGO CREEK WATERSHED
The Conewango Creek Watershed
The Conewango Valley Flood Control Association, Inc.
BEFORE . . .
AFTER . . .

Place mats are used by local civic clubs, church gatherings and garden clubs.

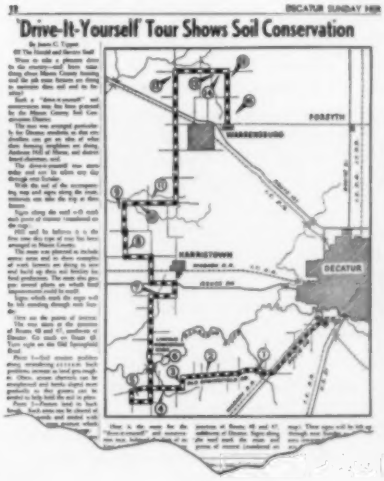
information

Roadside Billboards—A Connecticut watershed project is attracting motorists' attention through roadside signs where watershed project dams are near highways. They tell the people about an otherwise unidentified community improvement.

Window-shade Visuals—Another Connecticut group found that jumbo color illustrations could be made on standard window shades. Watershed maps, cross-section drawing of dams and other ideas were illustrated on 4x10 foot, light-weight canvas shades. The shades were hung, four up, on a folding aluminum stand and used for large public meetings and TV shows.

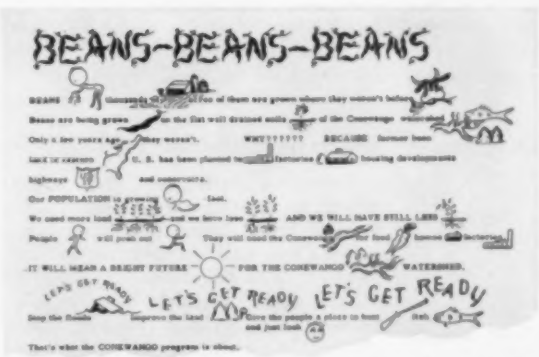
Home-made Slide Cartoons—One New Hampshire SCSer took advantage of his amateur art ability and made stick-figure cartoons on 35mm frosted glass slides. He was able to illustrate points that photos would never show. The cartoon slides perked up his talks before school groups, civic clubs and on TV.

These are a few of the ideas being used to give ag information programs the "Madison Avenue" touch. Continuous slide projectors with synchronized sound, conservation photo-murals, brochures, comic books are among many other gimmicks adding to the trend to popularize soil and water conservation efforts. ☆


'Drive-It-Yourself' Tour Shows Soil Conservation

Do-It-Yourself tour guide (left) made an interesting story and a handy item to pass out.

Roadside sign identifies conservation project.



Cartoon-styled mailing piece, part of which is shown above, helped build interest among cooperators of a New York District.

Low-cost rubber stamps with a short slogan or symbolic imprint can spread a project name to all points.

Placard given to joiners of Gates Creek (N.Y.) Watershed Association was effective advertising.

Reflecting bumper placards paid off with increased interest in Ischua Creek Watershed in New York State. Peggy McFaul and Nancy Smith place one.

late research

- *Why more insects some years than others? Maybe we can blame it on the weather*
- *Scientists have adapted a device to examine pork chops—while they're walking*
- *A mechanical egg counter makes easier the job of weeding out poor producers*

Ever see a pork chop walking? It's possible with the help of a device that lets scientists see how good the meat is on animals while they're still alive. The device bounces high frequency sound waves off layers of meat and fat, creating echoes that can be translated into visual form on polaroid film. Designed for examining metals, it was adapted for use on steers last year by Prof. James R. Stouffer of the New York State College of Agriculture. First public demonstration on swine was made March 23 at Cornell's Agricultural Progress Days. With swine as with steers, the device examines meat at the 12th rib. It provides an index of the proportion of lean meat to fat.

Effectiveness of Dynafac and DAS for fattening cattle was studied recently at South Dakota State College. DAS (diallyldiethylstilbestrol), which produces low estrogenic activity, wasn't very effective in promoting feedlot gains. But dynafac showed a 5.9 per cent increase in rate of gain plus a 3.4 per cent advantage in feed efficiency. DAS fed at three different levels did not produce consistant results.

Dynafac has an antibacterial property and works in the digestive tract of the beef animal.

Bloat symptoms have been watched in this and other experiments where dynafac has been used. Dynafac has been fed to 362 cattle, and 284 animals were fed similar rations without dynafac. There have been no losses from bloat or other digestive disturbances among animals fed dynafac, while six animals or 2.1 per cent of the animals in lots not on dynafac have ben lost because of bloat.

Some of the trouble may be taken out of the troublesome business of keeping brush from over-growing railways, highways and power lines—as a result of research at the agricultural experiment station at Virginia Polytechnic Institute. The "dormant cane broadcast method" of application developed at VPI will make it possible to make chemical applications for brush control almost year-round instead of just in the summer. W. E. Chappel, plant physiologist at the station, explains that the method involves wetting all the above-ground portion of stems with a mixture containing 6 pounds of 2, 4, 5-T or a combination of 2, 4-D and 2, 4, 5-T in 100 gallons of fuel oil. Usually 150 to 200 gallons per acre is enough. Applications can be made any time after leaves are off in the fall until bud-break in the spring.

Using this method, all species can be killed to the ground level if enough materials are applied to insure good coverage. Certain species, such as sassafras and black locust, often resprout the second year after application, but these same species are also hard to kill with a summer spray.

PCNB controlled cotton seedling diseases better than 16 other chemical fungicides, and low-volume spraying of the material was superior to dusting in the planter box. These are the findings of C. R. Maier, assistant professor of plant pathology with the agricultural experiment station of New Mexico State University after two years' field experiments. Applied at a rate of 3.5 pounds in 25 gallons of water per acre, PCNB increased the lint yield of cotton by an average of 220 pounds per acre and the cash return by an average of almost $75 an acre over untreated checks.

Research indicates the argument for mating dairy heifers with smaller breed bulls to make calving easier doesn't always hold true, according to R. W. Touchberry, University of Illinois dairy scientist. He cites University of Wisconsin research which shows that crosses with Angus bulls and Holstein heifers usually produce calves weighing five pounds more than calves from a Holstein bull—Angus heifer cross. This suggests that the breed of the cow has more influence on birth weight than the breed of the bull. The dam's influence on birth weight was also indicated in crosses made between Guernseys and Holsteins at the University of Illinois.

In the Illinois experiment, Guernsey heifers mated to Holstein sires had no more trouble in calving than did those mated to Guernsey sires. And Holstein heifers mated to Guernsey sires had no less difficulty than those mated to Holstein sires.

Why are insects more numerous some years than others? Clemson College entomologists think that at least part of the answer lies in weather conditions. Research now underway at Clemson is designed to find out just what influence the weather has on insect populations.

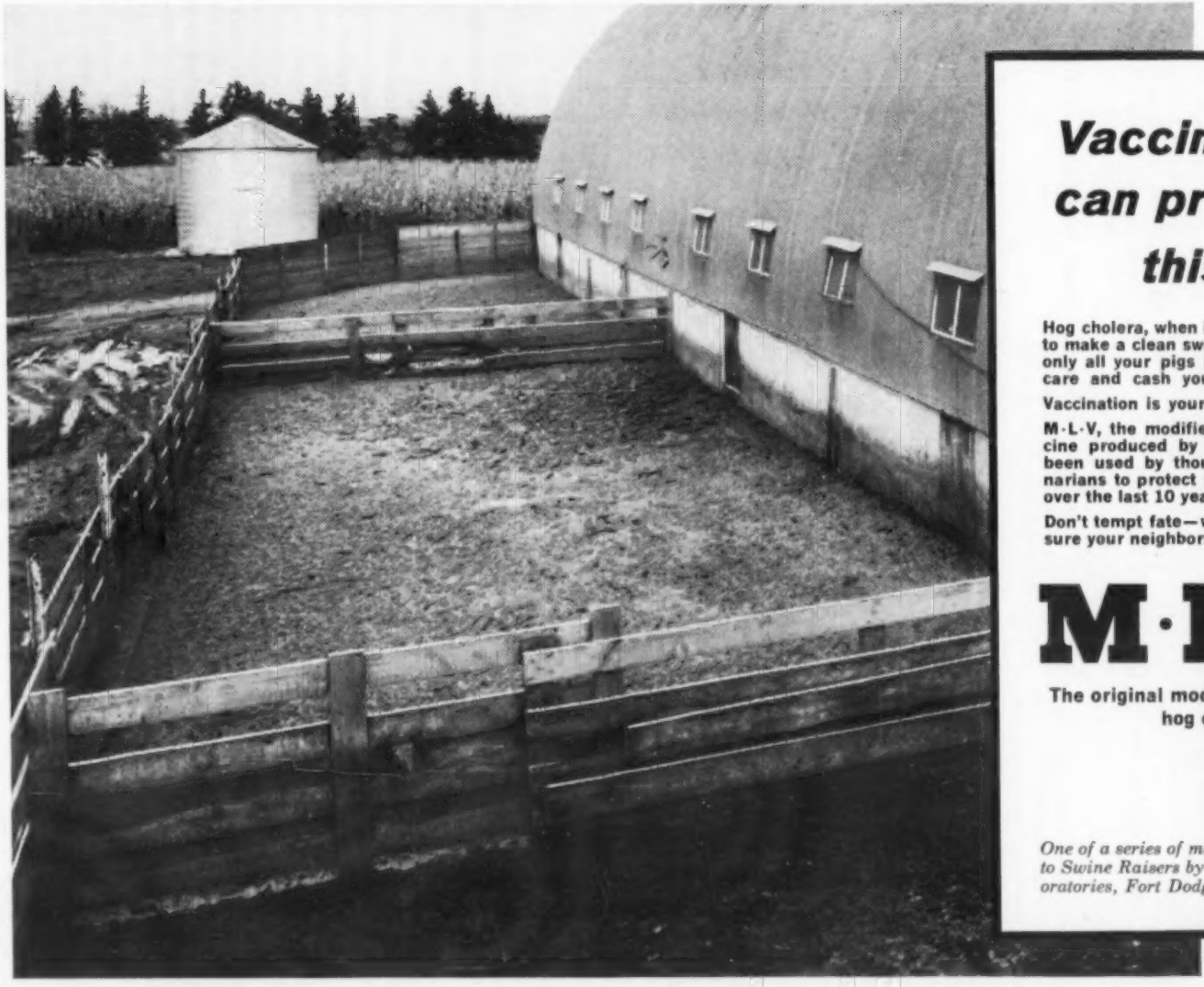
Dr. E. W. King, associate entomologist, has one of the most complete college weather laboratories to be found anywhere in the country. There's another weather station, almost a duplicate of the one at Clemson, at the Pee Dee Branch Experiment Station at Florence.

It may sometime be possible, say the researchers, not only to record what is happening in the insect world, but even to predict insect populations.

A mechanical egg counter has been invented by Prof. Robert T. Lorenzen of the New York State College of Agriculture. Used in conjunction with the "mechanized cage system" of egg production in which hens are kept in individual cages, the device counts the eggs as they roll from the cage to a conveyor belt that takes them to the packing room. It retains the count over a period of several weeks, enabling farmers to detect at a glance any drop in production. Its chief function, Lorenzen says, is to make easier the job of weeding out poor producers. Recently patented, the counter was developed while Lorenzen was a graduate student at the University of California.

Basic research findings that explain the hatching mechanism of coccidial cysts may open the way for effective coccidiosis control in poultry and livestock, USDA reports. Dr. John C. Lotze and Robert G. Leek, parasitologists of USDA's Agricultural Research Service, were able to induce hatching of coccidial cysts in the laboratory after treating them with enzyme and bile.

This work indicates the possibility of control *within* the host by drugs that would interfere with hatching action, and of control outside the host by use of enzyme-like substances as sprays or other treatments to destroy the protective coverings of coccidial parasites in forage, feed or water.



Vaccination can prevent this!

Hog cholera, when it hits, is very apt to make a clean sweep. You lose not only all your pigs but all the corn, care and cash you have in them.

Vaccination is your only protection.

M·L·V, the modified live virus vaccine produced by Fort Dodge, has been used by thousands of veterinarians to protect millions of swine over the last 10 years.

Don't tempt fate—vaccinate. And be sure your neighbors do!

M·L·V®

The original modified live virus hog cholera vaccine

FORT DODGE®

One of a series of messages addressed to Swine Raisers by Fort Dodge Laboratories, Fort Dodge, Iowa.

ag leaders audio-visuals

news and views by George F. Johnson

"HAVE automatic, remote controlled slide projector, can do better job of illustrated lecturing." This might well be regarded as the latest audio-visual version of "Have gun, will travel."

Agricultural workers who have had continuing experience with automatics for the last few years seem quite unanimous in their belief that this type of equipment is here to stay. As lecturers gain experience, they express preference for the automatic equipment—especially that with remote control.

With the manually-operated machines, the speaker is always confronted with this decision: Shall I remain at the projector to be sure everything is done correctly, or shall I go to the front of the room and entrust all operational details to someone else?

The consensus of opinion seems to be that the speaker's place is at the front of the room most of the time. One solution has been to acquire the services of an operator who will change the slides at a pre-arranged signal. This system puts the lecturer up front but introduces other complications. A signal to change slides can be distracting. Likewise, the person running the projector becomes an attraction.

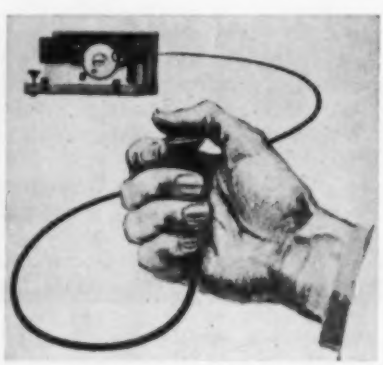
The automatic projector with remote control solves these problems. It provides an image sufficiently bright that the audience can take notes and the speaker can see faces since the room need not be completely darkened. Here's how "remote" works: The lecturer arranges his slides in proper order in the projector tray and has the equipment ready to operate before the program gets under way. A remote control cord runs from the projector to the front of the room. Pressing the button at the end of the cord changes the slides. If it is desirable to augment slide information with other visuals, the lecturer can move to these visuals and still maintain control of the slide projector.

I recently asked an extension specialist for his reaction to remote control after almost two years of experience. He summed it up this way: 1) It gives me control of the entire situation which I like; 2) It's especially advantageous for an illustrated panel presentation; and 3) It enables a higher position for the projector so that there is less interference from persons sitting in front of the projector.

One precaution: Test all slides in advance to see that they have identical focus. Slides in different types of binding, slides purchased in foreign countries, and slides reversed in the projector may cause focusing problems. Most of these problems can be overcome by binding all slides identically and by correct positioning in the slide trays. Some projectors have remote focusing as well as slide changing.

Many slide makers who use magazine-loading automatic projectors do not bind their slides. The cardboard mounted slides are placed in the metal or plastic trays and are filed that way ready for projection any time. It has been my observation that cardboard mounted slides sometimes pop out of focus so that refocusing by an attendant at the projector is necessary. Some manufacturers emphasize the fact that their projectors do not pop the slides. This is a great advantage when using remote control.

Among the manufacturers of automatic, remote controlled slide projectors are Ansco, Argus, Bausch and Lomb, Bell and Howell, Eastman Kodak, Graflex, Inc., Keystone Camera Company, LaBelle, Inc., Revere Camera Company, Sawyer's and Wollensack Optical Co. Viewlex, Inc. also has remote control of filmstrip projection.



Remote control at work

Quick TV Slides

Getting news pictures, tabulations and drawings onto 2" x 2" slides for television use in minutes, is described in detail in "Polaroid Pointers" recently published by the Polaroid Corporation. *(Some of the techniques explained are similar to those developed two years ago by Dr. George F. Johnson of The Pennsylvania State University, for getting quick 2" x 2" slides for use in extension meetings.*—EDITOR*)*.

Been Waiting for This?

Quick processes using simple, portable equipment for making transparencies (larger than 2" x 2") from any subject matter to project on an overhead projector, are now reaching the market. Ozalid Division, General Aniline and Film Corporation, is just out with Projecto-Printer 40 called a "single-unit process which makes transparencies for overhead projection from any source material *in minutes*."

Ansco has recently issued a 50¢ booklet entitled "Color Fun" to tell you all about getting the most from Anscochrome and Super Anscochrome films.

What's New?

Kodachrome II is now a reality. It's the new, faster color film mentioned before in this column. Actually it is two and a half times as fast as the Kodachrome film of the past. At ASA 25, this film opens up new opportunities in color photography. According to reports, this film is now moving into dealers' hands and should be available to everybody by the time this reaches our readers.

What is the Future of 8mm Motion Pictures?

Speculation is the order of the day right now. We will be surprised if 8mm replaces very much 16mm film. Possibly the biggest opportunity for 8mm will be new uses where film has not been used before. Usage of 35mm was not replaced by 16mm twenty years ago; however, it opened up a new film industry previously untouched by 35mm. The same could be done by 8mm.

Education — sales — training, hold wonderful opportunities to utilize the size and possible cost economies of 8mm. Films may be used to replace text books or printed matter . . . the possibilities are limited by your own imagination. Whether these ideas are ever realized, only time will tell. One thing is certain, however . . . 8mm has arrived and we as a motion picture laboratory are ready for it!—*The Calvin Company.*

WANTED:

far-sighted salesmen to sell new fertilizers a new way in the Midwest

Effective October, 1961, fertilizers will be sold a new way in the Midwest. They will be sold as part of a program. A program tailored to specific soils and crops, that begins with planting and follows right through to plentiful harvest. In short, an ORTHO fertilizer program.

What is this new way of selling?

To put it simply, it is selling *results*, rather than a product. It is selling the increased yields and higher profits fertilizers can bring, rather than fertilizers themselves. ORTHO has sold fertilizers this way in the West for years, with outstanding results. The ORTHO fertilizer program is something farmers have come to rely on. Soon, for the first time, the kind of fertilizers used in an ORTHO program will be available in the Midwest. They will be made in an entirely new way, by an exclusive process, at a huge new 22 million dollar facility being built at Fort Madison, Iowa.

What kind of man is needed to sell them?

First and foremost, he must be interested in doing something for somebody else. Because this man's whole premise in selling ORTHO fertilizer in an ORTHO program is to *help the farmer increase yields, and make money* with the products he sells. Because the company he will work for—the California Chemical Company—is not just interested in sales today. They are interested in the long-term growth of agriculture in the Midwest. Education? A college degree or the equivalent. Experience? At least two or three years of successful selling.

What does this company offer him?

Most important – rewarding work. The ORTHO slogan is "Helping the World Grow Better". Men who work for this company will be doing exactly that. Opportunity for advancement is unlimited. A man can grow within, and *with*, a company which – already a world leader in agricultural pesticides – is heading for new horizons in the exciting field of petrochemicals. Fringe benefits are far above average—the same as those of the parent company, Standard Oil Company of California. Applicants are being hired right now. Send resume of experience, with a letter outlining long range aims and ambitions, to Mr. E. H. Solinsky, California Chemical Co., Ortho Div., 200 Bush St., San Francisco, Calif. Replies will be held in strict confidence.

ORTHO®

HELPING THE WORLD GROW BETTER

JOB OPERATION SHEETS

Steps to follow as listed in the Job Operation Sheet can be used in the school shop, on the farm or in a demonstration with students. Above Mr. Paul West, vo-ag teacher, Byron-Bergen, N. Y., and members of his agriculture class calibrate a piece of machinery.

will help you develop skills and improve work habits

By JOE P. BAIL

MECHANIZATION in today's farming operations requires knowledge and skills unheard of only a few short years ago! That's why in your farm mechanics programs, students should learn to follow the specific and orderly steps designed to carry a job to completion. What's needed:

Job Operation Sheets!

They're not new as a teaching tool by any means, but combined with the regular teaching plan, they can aid materially in developing skills and improving work habits.

Whether the job is being done on the farm, in the school shop, or as part of directed experience in agriculture, the Job Operation Sheet can give both the teacher and students confidence in their ability to carry out the job.

Job Operation Sheets can make the teaching of agricultural mechanics more systematic. They aid the teacher of agriculture in organizing his teaching content to cover the important jobs in a specific area. The several Job Operation Sheets, plus other units in agricultural mechanics teaching, combine to form the agricultural mechanics section of the Course of Study. Teachers are thus able to answer in a direct manner when asked about the "agricultural mechanics" content in vocational agriculture.

Our job operation sheet consists of the following:

Title. The common name of the operation as performed on the farm is used in identifying each Job Operation Sheet.

Tools and Materials Needed. A listing of the essential tools and materials for the job is given. This list is particularly useful to the teacher in preparing to give a demonstration.

Procedure. The step-by-step procedure to follow in carrying out the job operation is given. Conciseness plus adequate coverage of the essential points are stressed.

Safety Precautions. Specific safety precautions or hazards to watch for in actually doing the job are listed for the benefit of the student and teacher alike.

Supplemental Information. Facts which aid in understanding the reasons for carrying out certain procedures are given here. Attention is placed on information which will make for good understanding on the part of the student.

References. Standard references which the teacher or student may consult for further details are given. Only those references which were used in planning a given Job Operation Sheet are included.

A sample of one such Job Operation Sheet is reproduced below.

JOB OPERATION SHEET

Title: Servicing the Cooling System

Tools and Materials Needed:

1. Clean soft water or rain water.
2. Antifreeze (in season).
3. Funnel and containers.
4. Commercial radiator cleaner or washing soda.
5. Pliers.
6. Screwdrivers.
7. Grease gun with water pump grease.
8. Clean rags.
9. Wrenches (¼-1½").
10. Ruler or steel tape.
11. Rust inhibitor.

Procedure:

1. Before starting the tractor, inspect the level of coolant in the radiator.
   (a) Remove the radiator cap.
   (b) Inspect the coolant for a rust and scum collection on the top of the coolant. When this condition exists, drain and flush the cooling system as soon as possible. (Follow procedure outlined in 7 below.)
   (c) Add coolant, if necessary. The level of the coolant should be maintained approximately 2 inches below the top of the filler neck. In all cases, the coolant must be above the tubes of the radiator core for proper operation. When possible, avoid pouring cold water into a hot engine or hot water into a cold engine. When this is necessary, idle the engine while slowly adding the coolant.
   (d) Replace the cap — it must be tight to function properly.
2. If the radiator cap is to be removed when the engine is hot, place a rag over the cap to prevent scalding.
   (a) Turn the cap counterclockwise to the safety stop and allow the pressure to be released.
   (b) Using a slight downward pressure, continue to turn the cap in a counterclockwise direction and remove it from the radiator.
   (c) Inspect the pressure cap for wear or damaged gasket.
      (1) When the engine is hot, release the cap slowly to determine the pressure build-up.
      (2) Inspect the gasket and bear-

(Continued on page 21)

SPONSORED

Research BULLETIN

COUNTY AGENT
VO-AG TEACHER

CAPTAN . . . MOST VERSATILE ORGANIC FUNGICIDE

SPONSORED BY STAUFFER CHEMICAL COMPANY • 380 MADISON AVE. • NEW YORK 17, N. Y.

EVERYONE SHARES LOSS FROM PLANT DISEASES

USDA authorities have estimated that plant diseases cost us at least three billion dollars a year, or more than $60 for every household in the U. S. This loss is shared by everyone in the form of higher food and fibre costs and by a reduction in farm purchasing power for production and consumer goods.

Long ago man discovered that certain compounds tended to inhibit the spread of plant diseases. A major milestone in disease control came when the fungicidal properties of elemental sulfur were discovered. Since then, millions of dollars have been spent on research to develop new and better fungicides. Progress has been good. Farmers today have a whole arsenal of effective, inexpensive fungicides.

THE PROBLEM HAS TWO SIDES

Most plant diseases are caused by fungi which rot parts of the seed or plant, or cause losses by making the plant less efficient. Fungicides are chemicals which kill or prevent establishment of fungi. A fungicide must effectively stop or prevent the spread of disease, and at the same time, it must not seriously interfere with the normal growth pattern of the plant. To control the disease is one thing, but if the control kills or seriously injures the plant, the battle is won but the war is lost. The ideal fungicide controls disease with no injury to the plant.

ORGANIC CHEMISTRY HAS THE ANSWER

Most of the recent progress in disease control has come from organic chemistry. One of the most unusual fungicides yet discovered is captan, a fungicide of great versatility. Since its introduction several years ago, captan has been widely acclaimed as an excellent and safe control for a wide variety of fungus diseases on plants, trees, seeds and in the soil. It offers a combination of advantages never before seen in a single fungicide.

Captan is so effective in controlling apple scab and summer diseases that it has become the most widely used organic fungicide. It is also a major fungicide for peaches, pears, plums, grapes, berries and other fruits. In addition, it has wide application for vegetables, ornamentals and seed crops. And is now being used in ever increasing quantities as a seed treatment for soil-borne diseases.

Captan is safe for plants and fruits. When used according to directions, it does not interfere with foliage or fruit development. A residue of captan on the fruit at harvest is an advantage for it helps control storage rots. Captan is compatible with most commonly used insecticides and fungicides, is economical, and is available from Stauffer dealers in all parts of the country for use in conventional ground or aerial equipment as a spray or dust.

Following are specific details on captan for use on various crops. Dosage rates and use recommendations are on the label. Always read and heed label instructions . . . for best results and greater plant and personal safety.

Pre-bloom to harvest, captan gives highly effective control of apple scab and summer diseases.

FRUITS

Captan has three-way action against apple scab. (1) Applied before an infection period, it protects fruit and foliage from infection. (2) Applied shortly after infection occurs, it kills scab fungus. (3) And applied when scab spots first appear, captan inactivates the spots and prevents further spread of infection.

It's this highly effective three-way action that has made captan so useful as a fruit fungicide, especially during periods when weather conditions are favorable to the development of scab. But captan does more than control scab! It has proved equally effective against summer rots and other diseases right up to harvest.

In addition, captan has other unique features. When used through the entire growing season, growers have found it reduces scab to such a low level that control becomes easier each succeeding year because less scab overwinters. Scab control then becomes a minor problem. Thus, after several seasons of use many growers get good control with as little as one pound of captan per hundred gallons of dilute sprays.

In pre-bloom and blossom sprays on apples, captan and sulfur team up to control scab and powdery mildew. This same combination of fungicides is safe and effective in blossom, petal fall, shuck and cover sprays on peaches.

Captan is compatible with most commonly used fruit fungicides and insecticides, except oil and strongly alkaline materials. It acts as a safener for lead arsenate, and lets fruit develop fine color and finish.

Captan can be used up to day of harvest. In fact, late-applied sprays control fruit storage rots without exceeding residue tolerance. Its tolerance is 100 parts per million, giving it a wide safety advantage.

Captan controls the following fruit diseases:

Apples—Scab, frogeye, botrytis, Brooks fruit spot, blotch, sooty blotch, fly speck, black rot, black pox, botryosphaeria rot and bitter rot.

Cherries—Brown rot, leaf spot, blossom blight.

Citrus—(grapefruit, lemon, lime, orange)—Brown rot.

Grapes—Downy mildew, black rot, and current season infestations of dead arm.

Peaches—Brown rot, scab, blossom blight.

Pears—Scab, leaf stop (except Pacific Northwest).

Plums, prunes—Brown rot.

Raspberries, blackberries, dewberries — Anthracnose.

Strawberries—Botrytis fruit rot, leaf spot.

VEGETABLES

Successful control of vegetable diseases depends on using the proper fungicide in the right manner on the correct schedule. It is especially important to follow recommendations of local authorities. Weather, soil, disease and varieties differ in various sections of the country making it almost impossible to give anything but general recommendations.

Captan is an excellent potato seed-piece treatment to control seed rot and damping-off, and is recommended for potato storage rot control.

In addition, it is recommended for use as an asparagus root dip to stimulate shoot growth.

It is also recommended for angular leaf spot, anthracnose, downy mildew, early and late blight, gray leaf spot and Septoria leaf spot on beans, peas, melons, cukes, potatoes, squash and tomatoes.

ORNAMENTALS, TURF

Captan has proved highly effective for treatment of azalea, carnation and chrysanthemum cuttings to prevent damping-off. Cuttings are dipped in a captan solution before bedding.

It is also effective against rust and leaf spot of carnations, flower blight of chrysanthemums and black spot of roses. Captan is not only available to the commercial nurseryman or grower, but is the fungicide used in many popular brands of small package products for home and garden use.

Lawn and turf diseases such as brown patch, damping-off, leaf spot and root rot are effectively controlled by captan. Full directions for use are on the label.

SEED TREATMENTS

Captan has made a significant contribution to the science of seed treating. It is widely used by seed growers and farmers to protect seed against soil-borne diseases.

All corn planted in Iowa is treated with a fungicide by the hybrid seed producers. The most widely used fungicide in Iowa, as well as other areas, is captan.

Growers of vegetable seeds have long recognized the versatility and usefulness of Captan 75% Seed Protectant as a control for seed rots and damping-off.

Soybean growers are now using Captan 25% Seed Protectant to treat their seed right in the field when they plant. Application is made in the planter box for control of seed and soil-borne diseases, including damping-off, seed decay organisms and seedling blights.

The planter box method of application gives good coverage and eliminates additional handling of the soybean

From potatoes to roses, captan helps growers control profit-stealing diseases.

seed. Any excess protectant flows with the seed into the furrow, giving extra protection against soil-borne diseases. The recommended dosage is 4 ounces per bushel, or 7 ounces per 100 pounds of seed. Captan 25% Seed Protectant can be applied to previously treated seed.

Another new seed treatment is Captan-Terraclor® 10-10, a better control for cotton seedling rots in cold, damp weather. It gives two-way protection against the diseases which cause seedling damping-off or "soreshin" (Rhizoctonia), plus *Pythium*, *Fusarium* and other soil-borne diseases.

Captan Terraclor 10-10 can be applied in the planter box or furrow. Either way, application is simple and requires no extra handling of the seed. Growers find they can plant their seed earlier, get better stands and reduce the hazards of having to replant because of poor stands.

The most significant development in seed treating is combining captan with insecticide materials. Captan-insecticide combinations not only protect seed against soil-borne diseases but also against many soil insects. For the first time growers now have an effective two-way protectant in one material.

Captan is available in combination with each of the following: malathion, dieldrin, methoxychlor, DDT and pyrenone. Full information is available on the advantages and limitations of various captan-insecticide seed treatments. Write for specific details, telling us the kind of seed you are interested in treating.

WHEN USING ANY FARM CHEMICAL, ALWAYS READ AND FOLLOW LABEL INSTRUCTIONS CAREFULLY.

For more information on any pesticide mentioned in this Bulletin, or for free copies of the Bulletin, write to the address below.

STAUFFER CHEMICAL COMPANY

380 Madison Avenue, New York 17, New York

Glendale, Ariz. • North Little Rock, Ark. • Los Angeles, Calif. • San Francisco, Calif. • Tampa, Fla.
Harvey, La. • South Omaha, Nebr. • North Portland, Ore. • Houston, Tex. • Lubbock, Tex. • Weslaco, Tex.

Stauffer CHEMICALS

NOTICE: The information contained herein is, to our best knowledge, true and accurate. Because conditions of use which are of critical importance are beyond our control, we make no warranty or representation, express or implied, except that all products conform to the chemical description on the label. No agent of this company is authorized to make any warranty or representation concerning our products. Always follow directions and carefully observe all precautions on the label. Products used contrary to directions may cause serious plant or personal injury.

Printed in U. S. A.

Form NY 461-4042

JOB OPERATION SHEETS . . .

(Continued)

ing surface of the radiator cap for wear.

(3) If the gasket is worn, replace the cap with a new one of the correct type from the dealer.

3. Inspect the radiator, the radiator hoses, hose clamps and water pump for leaks, damage and signs of wear. A small pin hole is a major leak in a pressure system.
4. Periodically remove the trash collected on the front of the radiator and grill. Direct a stream of air and/or water under pressure against the back of the radiator core to flush out the dirt and trash.
5. Inspect the fan belt for condition and proper tension. If it is frayed or cracked, replace it with a new one. The amount of slack varies with the make and model of the tractor but is always measured half way between the pulleys. Check your Operator's Manual for the proper amount of slack.
6. Inspect the water pump for leaks. If it is not a sealed unit, apply water pump grease as recommended in the Operator's Manual. Generally one or two strokes on a hand grease gun are sufficient.
7. Each spring and fall, drain and flush the cooling system.
   (a) Stop the tractor on the level.
   (b) Run the tractor until normal operating temperature is reached. This will suspend rust particles in the coolant.
   (c) Stop the engine and remove the pressure cap and open the coolant drains. These drains are located in different places on different tractors; generally there is one under the radiator and one on the side of the engine block. Consult the Operator's Manual for your tractor.
   (d) Replace the drain plug(s) and fill the cooling system with water and a good commercial radiator cleaner or washing soda. When using washing soda, mix 3 lbs. of soda to 7 gallons of water.
   (e) If a commercial cleaner is used, follow the directions specified on the container regarding the length of time the solution should be left in the engine.
   (f) Open all drain plugs and drain the cleaning solution from the cooling system.
   (g) Replace the drain plugs and fill with clean water. Operate the engine until normal operating temperature is reached.
   (h) Drain the system again and refill to proper level with either clear soft water or antifreeze solution.
   (i) If water is to be used, a good commercial rust inhibitor should be added to the system. The rust inhibitor is usually included in antifreeze solutions.

Safety Precautions:

1. Use a rag to remove the pressure cap from an engine which is hot.
2. Don't run the engine while draining the cooling system.
3. Avoid getting flushing solutions on hands and clothing. These solutions are of sufficient strength to cause serious burns.

Supplemental Information

1. The purpose of the cooling system is to remove excess heat and maintain proper temperature.
2. The radiator should be drained and flushed each spring and fall.
3. The pressure settings on pressure caps vary from 4-15 PSI; therefore, it is best to purchase a new pressure cap from the dealer who sells your make of tractor to insure a cap of the correct pressure for your tractor.
4. Use only clean soft water as a coolant. Hard water will cause deposits to form on the inside of the cooling system. When this condition exists, the cooling system will not function properly.
5. The temperature gauge is an important part of the cooling system. It tells the operator when the engine is at operating temperature, when the engine is too cold for loads and when it is too hot. If the gauge is broken, it should be immediately replaced. The following factors indicate the possible troubles which will escape detection when the temperature gauge is broken or defective:
   (a) Temperature too low:
      (1) Sludge will build up in the engine.
      (2) Fuel is wasted.
      (3) Power is lost.
      (4) Engine wear is rapid.
   (b) Temperature too high:
      (1) Engine will knock.
      (2) Valves will burn and stick.
      (3) Piston rings will fuse to the cylinder wall.
6. Radiator shutters should be used in extremely cold weather to maintain normal operating temperatures for the engine.
7. An engine which has reached operating temperature should be allowed to idle a few minutes prior to stopping to allow the pistons to cool.
8. The normal operating temperature of a gasoline engine is between 165 and 185°F.

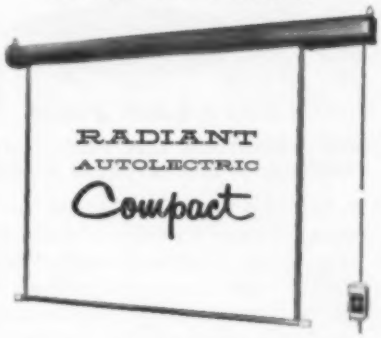
References:

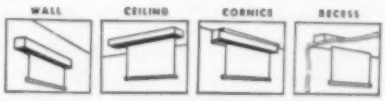
Operator's Manual.

J. P. Bail is associate professor, rural education department, New York State College of Agriculture, Cornell University, Ithaca.

NEW

ECONOMY PRICED





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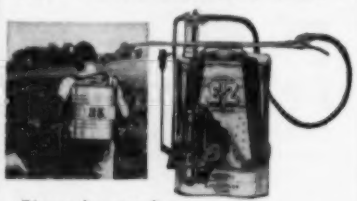

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In Rockingham County, North Carolina farmers solved their dry weather problems and increased their gross income $250 per acre when their

County agent helped "SELL" irrigation

By H. M. ELLIS

SOUND financing has been cited as a key factor in the adoption of a new practice which has added $660,000 to the annual agricultural income of Rockingham county, North Carolina.

Rockingham county's success story began in 1952 when dry weather seriously hurt the county's principal crop, tobacco. Farmers were hit hard. So were businessmen, especially farm implement dealers. These dealers experienced a large number of repossessions. Many other notes were carried on a "faith basis."

There was one bright spot in this gloomy picture, however. Some tobacco farmers had made it through the drought without much difficulty. These were farmers with irrigation systems.

The success of farmers who had irrigation systems convinced a lot of sound business people that irrigation could solve many of their dry weather problems, particularly in reference to tobacco production.

AGENT IMPROVES "IMPRESSION"

County Agent Ed Foil and his assistants had done much to promote a favorable opinion of irrigation. They had repeatedly emphasized that irrigation as a production tool would pay dividends. With this background certain equipment dealers discussed the possibility of financing irrigation equipment with the president of the Bank of Reidsville.

An agreement was reached. Loans would be made at 25 per cent down with three crops years to pay. Dealers were required to endorse their paper at the bank, which made them directly responsible for the design of systems sold and for the equipment's proper operation. This understanding, more than any other one thing, accounts for the outstanding success of the program.

Dealers had some other responsibilities too. They had to be sure a farmer was ready to adopt irrigation and also make certain that he had the information and equipment to do the job properly.

SUCCESS AT ROCKINGHAM

Now for the success of Rockingham program.

Today there are 400 irrigation systems in the county costing an average of $2,000 each. Banks loaned $400,000 of the money required to buy the systems.

Since some custom work is done, it is estimated that about 600 different farmers irrigate all or part of their crop.

The county has 12,000 acres of tobacco. Today one-third of the acreage is irrigated as compared with an overall state average of only 12 per cent. In addition, 500 acres of other crops are irrigated with the systems.

In 1959 tobacco farmers who irrigated averaged $250 per acre more gross income than farmers who didn't. Irrigation expenses per acre were about $85, leaving an additional net income of $165. The average tobacco farmer who irrigated averaged $1,100 more for his crop than the farmer who didn't.

During the past seven years, tobacco yields in Rockingham county have increased between 450 to 500 pounds per acre. And not only have yields increased, but County Agent Foil says the quality of the crop has greatly improved.

"We feel that our faith in irrigation is justifiable," the banker commented. "We loaned $400,000 to be used in purchasing irrigation equipment. And we have not had a single repossession."

All the banks in Rockingham county have contributed to the irrigation program, as well as other agricultural programs conducted by the Agricultural Extension Service.

H. M. Ellis is In Charge, Extension Agricultural Engineering, North Carolina College of Agriculture, Raleigh.

The Combine that Corn Built

Corn dictated the design of this combine, the proportions of its components, the ruggedness of its build. Because the "king of crops"—bulkiest and toughest of all—overburdens the traditional grain machine, Oliver recognized the need for totally new construction standards.

So, Battle Creek engineers gave the Oliver 25 a solid, balanced stance on a husky frame... put in reserve engine power... made threshing, separating and cleaning units oversize... provided quick, easy interchangeability of grain and corn headers. Here's a perfect blend of wheatland and corn-belt harvester advancements—the practical, all-season, all-purpose combine for any farm of any size.

Harvesters of international fame have come from Oliver factories since 1848: the Vibrator, the Red River Special and the only mass-produced combine that actually "threshes" corn—the Model 40. Your neighborhood Oliver dealer is the source of a full line of equipment to make farming more profitable and pleasant. His counsel is at your call. Also, consult him when equipment and shop facilities are needed for educational projects.

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THE NEWS

IF you've got the "real stuff"

Humor can "pay off" in column writing

By JOHN M. WHITE

BREVITY, with a touch of humor! That's the formula used by Philip E. Crystal—Curry County, New Mexico, extension agent—to put his weekly column across to thousands of readers. Crystal writes a weekly column for the *Clovis (N. M.) News-Journal* and a monthly column for the *New Mexico Farm and Ranch* monthly magazine for the state farm and livestock bureau.

Most of the items in his column are one or two sentences long. Humor is intermixed with straight advice, about 50-50 proportion. Even the humorous side often has a barb of wisdom attached to it.

Crystal's readers are attracted to his column because it looks "easy to read" and they like his sense of humor. They often swallow the Extension message without knowing that they are taking medicine. His weekly column averages about eight paragraph items while his monthly magazine column is about twice that length.

Where does he get his items? Crystal keeps his eyes open and his ears to the ground in his search for items that may be jotted down for his column. Of course, he thinks up a lot of the wise sayings on his own.

Puns feature the titles of Crystal's columns. One is entitled "Crystal Clear" and the other "Crystal Ball."

Crystal graduated from Cornell University and has been with the Extension Service of New Mexico State University since 1948.

John M. White is Agricultural Editor, New Mexico State University, University Park, New Mexico.

"Crystal Clear"

BY PHILIP E. CRYSTAL

J. L. Coffey tells me that following the two-inch rain they had last week, he found a ten-year-old bullfrog at the house and threw him in the lake ¼ mile south. Said the frog drowned. He'd forgotten how to swim. S'help me!

For those who plan to use weed killers on their crops:

1) Sorghum and corn should be 6 or 8 inches high before use.

2) Weeds should be small.

3) Weed killers can injure crops in the "boot."

Wonder if range grass fertilization experiments might not need to be carried further than they have been at this point, especially in places where adequate moisture for continuing growth is assured? Possibly some high rates need to be used experimentally—100 lbs. available N and such as that. Your county agent can help you organize a set of trial plots.

If we ever get smart enough in this country to make it as easy for a kid to buy a small bottle of milk as it is for him to buy a lot of other things, both the dairy industry and the kids will be better off.

Try this on one acre of corn, see what happens—in Mississippi, a 4-H Club boy got I won't say how much corn:

700 lbs. of 15-15-15-plowed down.

300 lbs. of 15-15-15, side dressed.

30 tons barnyard manure.

700 lbs. ammonium nitrate plowed down.

300 lbs. ammonium nitrate side dressed.

FARM-RANCH OFFICE SIGNS:

"You can't do today's job with yesterday's tools and be in business tomorrow."

"Be sure brain is engaged before putting mouth in gear."

"Work hard—the job you save may be your own."

"The only job where you start at the top is digging a hole."

I see that certain types of fertilizers may be applied through sprinkler irrigation systems. It takes a little learning by doing, but can make for some additional efficiency—if you are using a sprinkler, that is.

Along these lines, material from the Atomic Energy Commission, as well as work at Ohio State University and other places indicate that nitrogen and phosphorus are absorbed quite efficiently from both sides of the plant leaf.

A thought for the modern farmer from Bill Fowler, our extension economist. Have you thought about incorporation? It may have some value management-wise for you. Be glad to help you find out more about it.

A side note: Things can be done without government help if necessary. There have been some 40,000 plus acres of land treated for grasshoppers through community programs in Curry County. A wonderful job of organization and planning has been done by Barney Kelley, Sherman Horton, Sid Pipkin, A. B. Fleming, Virgil Harrison, and is being done by Bill Patton, Riley Wallace, Ralph Barrows, G. F. Thompson, Frank Deweese and W. N. Copeland. 'Sta Bueno, gentlemen.

I see where an automobile company's farm advisor says it's a good time to sell and a poor time to buy in the cattle business these days. Life is always hard on somebody!

A neck is something which if you don't stick out, you don't get in trouble up to.

Reprinted by permission of New Mexico Farm and Ranch.

"The Crystal Ball"

By Philip E. Crystal

Did you hear about the city feller that took a job on a farm? Well, he was sent out to harness the mule. It took quite a while, he said, to get the collar on the mule, because "its durned ears has froze solid." It was the cow.

It may be true as they say, that a wheat crop out here needs to die once or twice before harvest, but it's a little hard on the grower. He tends to die with it. It's quite an experience at this time of year to watch your 20 to 80 bushel wheat every time a cloud goes by.

Good judgment may be developed through years of exercise of poor judgment.

When you buy a quart of milk: The farmer gets 10.9 cents.

Marketing system gets:

Assembling milk	1.2
Processing	4.3
Retailing, delivery	5.6
Other expenses	1.2
Profit (before tax)	1.0

Total 24.2 cents

The greatest achievements of mankind have been accomplished by two types of men: those who were smart enough to know it could be done, and those who were too dumb to know it couldn't.

A word on using insecticides:

1. Follow the directions given by the manufacturer.

2. Be Careful. They can and will make you sick, or worse, if used improperly.

3. Don't use plant preparations on livestock.

4. In field spraying be sure you know how much your spray machine puts out per acre. Add the proper dosage per acre to that many gallons.

5. Be Careful. The nerves that get affected may be your own.

It is important to learn the trade before you learn the tricks of the trade.

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"The Crystal Ball"

By Philip E. Crystal

"Human beings are the only animals that can be skinned more than once."
Anon.

Many folks in planting grain sorghums this year are putting two rows to a bed or drilling, as with wheat. It is important not to up your usual rate of seeding too much. By spreading the seed out, we can give each plant more growing room if we don't increase the rate of seeding.

It is just as poor policy to spray small grains with weed killer while they are in the boot as it is to insult your father-in-law before you find out about his bank account. It can hurt germination and yield both.

Do you reckon it would pay to put fans in these poultry houses, caged in particular, to help cool the chickens down in the hot weather? They might appreciate the extra coolness enough to shell out a few more eggs. Same applies to hogs and beef. It's been proven commercially practical in California and other places.

Quote: *"Important as nitrogen fertilizer is, it returns its biggest dollar profits to the farmer who makes sure his soil also has plenty of the other plant food, such as phosphate, potash, organic matter."—University of Minnesota.*

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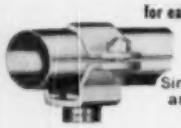

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county agents, usa

By VIC CAROTHERS

COUNTY AGENTS TO NEW YORK CITY SEPT. 10-14

County extension agents and their families from throughout the country will be converging upon New York City in early September. That's NACAA annual meeting time. The meeting itself is September 10-14 in the Waldorf-Astoria Hotel. Reports from various states indicate attendance will even surpass last fall's record annual meeting in Miami.

The theme of this professional improvement week is "Marketing In Action." And, an outstanding program on marketing has been developed in the largest marketing center of the world. Topnotch national speakers, challenging panels and outstanding educational tours are now confirmed. This offers county agents and their families a wonderful opportunity to learn more about and observe agricultural product marketing in operation. Tours of the famous Washington St. produce market, flower market, fish market, New York Stock Exchange and the Mercantile Exchange are included on the official program. And there will be opportunities to observe the largest port in the world, the principal gateway to our nation's foreign commerce.

The program also includes a tour of the United Nations and boat trip around Manhattan Island. Two evenings are left free for agents to treat their families to other entertainment which only New York City can offer. This includes a wide choice from Broadway plays and live TV shows to zoos, fashion shops—or you name it.

County agents in New York and surrounding states are really going all out to welcome their co-workers, wives and children from every state. They say "1961 is the year to make that long-dreamed-of trip to New York."

OKLA. EXPANDS PROGRAM

Oklahoma State University's Agricultural Extension Service recently held a planning session for an intensive soil fertility program. One county from each of the five Extension districts has been given the first opportunity to participate in the expanded program—Caddo, Custer, McClain, Pittsburg and Wagoner. Last year Okfuskee and Okmulgee Counties had pilot projects.

County agents from each of these counties along with their program building committees of local bankers, ASC, SCS, farmers, vo-ag teachers and business leaders attended the planning session.

Extension Agronomist Dr. Gaylord Hanes stated that the problem was low farm income caused by low soil fertility and high soil acidity. "The cure for low income is *enthusiasm* in an educational program," Hanes said. "The intensive fertility program is the lever in a motivation program to give the farmers the assurance that farming can be more profitable and to convince the community businessmen that the largest and most beneficial industry for his area is right under his feet—the soil and the agribusiness that it supports."

NEW STATE OFFICERS

Keith Jones, University of Arizona 4-H agent for Pinal County, is new president of the **Arizona** County Agent's Association. Other officers elected during the recent annual conference in Tucson were Lowell True of Phoenix, vice president; Alvin Allen of Prescott, secretary-treasurer; James McDougal of Kingsman, northern district director, and Bruce Kell of Nogales, southern district director.

Iowa County Extension Directors Association has named Melvin Wangsness of Fayette its new president. Vice president is Stanley Dunn of Red Oak, and secretary-treasurer is Tom Robb of Iowa City.

IMPROVING SWINE QUALITY

Milton Henderson, area extension 4-H leader at Creston, Iowa (right) has played an important role in developing a swine improvement program for 4-H members in Union, Ringgold, Taylor, Adams and Adair counties. A recent Creston 4-H Spring Market Swine Show had only one pig that graded number three in the carcass class.

There has been a steady increase in the quality of swine during the seven years the 4-H Swine Improvement Project has been operating. Percentage of number one grade hogs has increased from 20 per cent six years ago to 63 per cent this past year.

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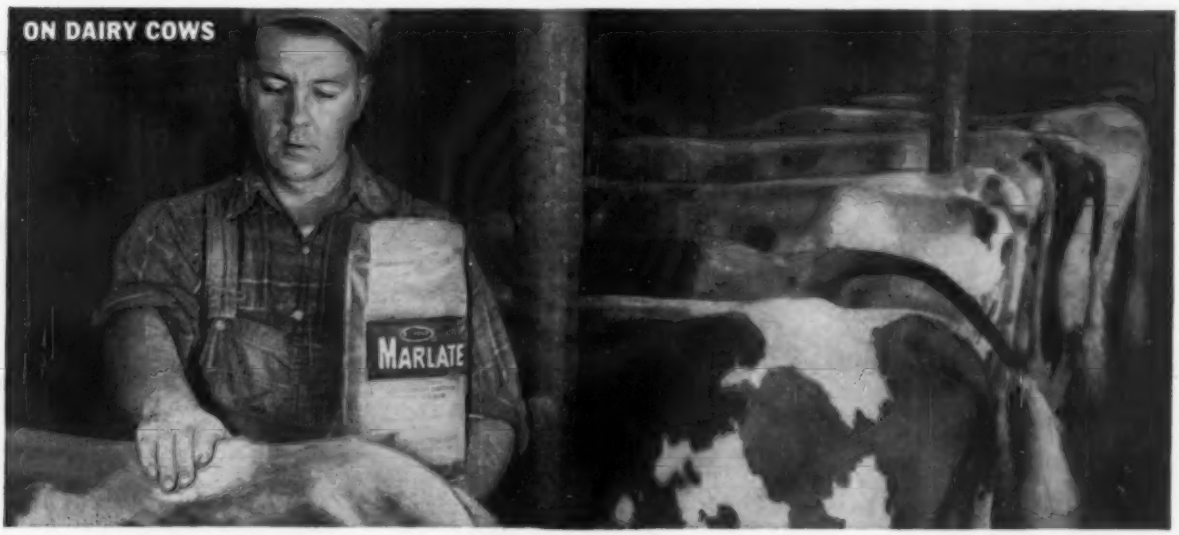
No other insecticide is recommended for the control of so many forage insects as methoxychlor—alfalfa weevil larvae, leafhopper, spittlebug, alfalfa caterpillar, armyworm, clover leaf weevil, flea beetle, pea weevil, cowpea curculio and others. These pests can cut clover and alfalfa yields by as much as a half ton per acre . . . reduce the protein and vitamin A content of forage, too. Spraying with Du Pont "Marlate" methoxychlor stops these insects, protects forage yields and quality.



Apply one tablespoonful of Du Pont "Marlate" 50 or Du Pont Dairy Cattle Insecticide per cow with your hand, as it comes from the bag, to control hornflies for about three weeks. One 4-lb. bag treats 20 to 30 cows for a season. No other insecticide is easier or more economical to use; no other gives longer-lasting, more effective protection.

Du Pont offers three formulations containing methoxychlor:
"Marlate" 2-MR, an emulsion; "Marlate" 50 and Dairy Cattle Insecticide, wettable powders.

On all chemicals, always follow label instructions and warnings carefully.

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AS A SPEAKER . . . ARE YOU A BORE?

Professional ag people are often asked to give a talk.

Vo-ag teachers, county agents, bank farm representatives, SCS workers—all of you, no matter what your specific agricultural occupation, are asked to present your views on countless topics in the field of agriculture.

It's a good feeling when folks seek your advice and knowledge—but, when given the opportunity, do you get through to them? Or are you regarded as a form of tranquilliser?

COUNTY AGENT & VO-AG TEACHER has prepared for you a 44 page, pocket-size booklet titled, *Guide To Successful Speaking* . . . designed to make you one of the most sought-after speakers in your locale. Author of the booklet is Harold P. Zelko, professor of speech, Pennsylvania State University.

Professor Zelko first presented his articles to you in this magazine last year. The demand for reprints was so heavy that it was decided to make a booklet out of the series.

This pocket-size *Guide To Successful Speaking* tells you how to 1) become a dynamic speaker, 2) plan and prepare your talk, 3) present your talk, 4) speak to influence others, 5) lead in discussion, and 6) improve your ability as a speaker through learning to listen. There is also a section which expounds on the major factors related to successful teaching.

The above subjects are written in language explicitly for the ag leader. This pocket-size book was written for you—and by following the advice in it, you will become the speaker you never thought you could be.

To obtain your copy of this *Guide To Successful Speaking*, send fifty cents to: COUNTY AGENT & VO-AG TEACHER, Willoughby, Ohio. A 20 per cent discount will be given on orders of 10 or more.

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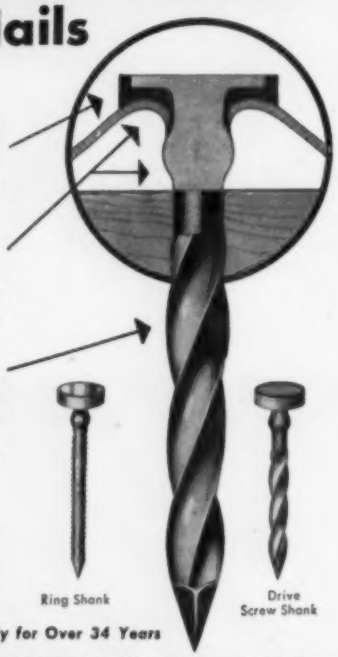

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what's coming up

May 4-5. Farmorama, Florence, S. C.
May 5-6. Student Agricultural Exposition, Virginia Polytechnic Institute, Blacksburg.
May 7. Rural Life Sunday.
May 29-June 16. Regional Extension Workers Summer School, University of Wisconsin, Madison.
June 9-10. New England County Agents Association, annual meeting, Boothbay Harbor, Maine.
June 11-14. American Dairy Science Association, 56th annual meeting, University of Wisconsin, Madison.
June 11-14. National Plant Food Institute, annual convention, The Greenbrier, White Sulphur Springs, W. Va.
June 13-15. County Agents and Specialists Summer School on Marketing, Michigan State University, East Lansing, Mich.
June 21-23. First International Beef Performance Congress, College Station, Tex.
June 27-29. Pacific Northwest Fertilizer Conference, Marion Hotel, Salem, Ore.
July 7-8. Northwest Section, American Society Range Tour, Okanogan, Wash.
July 10-14. State Conference for Vocational Agriculture Teachers, Edgewater Gulf Hotel, Edgewater Park, Miss.
July 11-13. Executive Committee Meeting, National Vocational Agricultural Teachers Association, Washington, D. C.
July 16-18. Joint Meetings of Western Section, American Society of Animal Production, and Western Division, American Dairy Science Association, University of Idaho campus, Moscow.
July 19-20. National Fire Safety Seminar, Thor Research Center for Better Farm Living, near Huntley, Ill. Subject: "Fire Safety on the Farm."
July 19-21. Southwest Fertilizer Conference and Grade Hearing, Galvez Hotel, Galveston, Tex.
August 8-11. Vo-Ag Teachers Association of Texas Convention, Austin, Tex.
August 9. Science at Work, open house and special non-technical reports by staff scientists, The Connecticut Experiment Station, Lockwood Farm, Mt. Carmel, Conn.
August 20-23. American Institute of Cooperation, summer session, University of Minnesota, Minneapolis.
October 29-November 1. National Agricultural Chemicals Association, 28th annual meeting, The Homestead, Hot Springs, Va.
November 2-3. Pacific Northwest Plant Food Association, annual convention, Hotel Gearhart, Gearhart, Oregon.
November 17-23. National Farm-City Week.
November 26-30. National 4-H Club Congress, Chicago.
January 17-19, 1962. Southern Weed Conference, Hotel Patten, Chattanooga, Tenn.

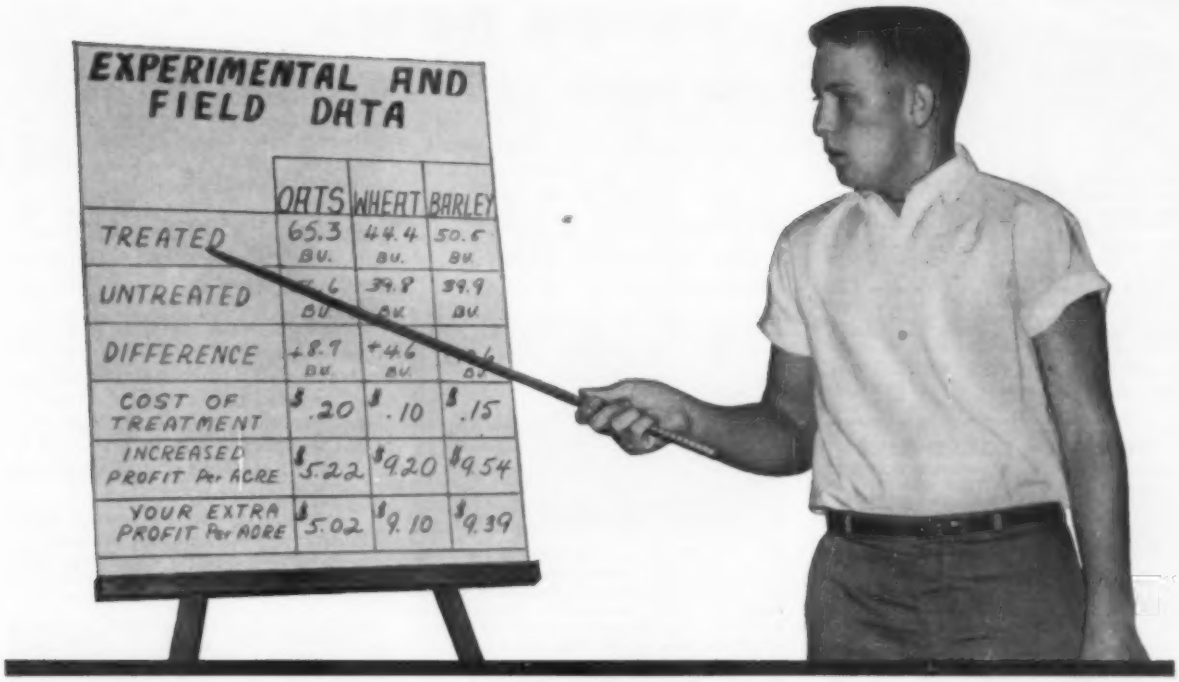
★ ★ ★ ★ ★ ★

AGENT NAMED COMMISSIONER

Minnesota's new Commissioner of Agriculture, Duane A. Wilson, comes from the ranks of the county agricultural agents. Wilson is a native Minnesotan, born and raised on a farm near Pipeston where he was active in 4-H and FFA work as a youth. Since 1946 he has been county agricultural agent in Sibley County.

"FARM MECHANOMICS"

That's the new phrase invented by New Holland Machine Co. Its definition: "The effective and scientific use of mechanization in the economics of modern farming methods."



Increase farm income $25,000 to $300,000 per county with seed treatment

"Best way I know to put $25,000 of extra spending money into my home county would be to treat all the small grain seed with a good seed treatment," says Danny Lamb, Swainsboro, Ga., winner of the 1960 Georgia Crop Improvement Project Award.

Danny's work shows that income from oats can be increased by $5 per acre with seed treatment . . . wheat by $9.10 . . . and barley by almost $9.40. This figures out to well over $25,000 for the small grain acreage in his home county.

Counties with larger acreages in small grains, cotton, sorghum, flax, and peanuts can reap still bigger benefits . . . as high as $300,000 per county for the high-producing grain counties of the Great Plains.

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You can help increase farm income in your county by telling more farmers about the benefits of seed treatment. Morton Chemical Company, makers of Panogen seed fungicide, Drinox seed insecticide, and Pandrinox dual-purpose treatment will help. They'll provide booklets, films, and other helpful materials. Use the coupon below to request information.

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vo-ag news

TEACHER FEATURED

Have you seen the article "Teach Vo-Ag and Mold Men on the Jack Nowels' Pattern" appearing in *Better Farming for Better Living*, Spring Issue (published by Oliver Corp.)? Written by R. S. Sevorg, the article describes Nowels' work as a vo-ag teacher in Loudonville, Ohio.

FFA students participate in Nebraska Land Judging Activity, under supervision of the Nebraska Soil and Water Conservation Districts. V. D. Rice, Region III NVATA vice president, who sent us the photo, says "Possibly more of this (land judging) should be done by both FFA and 4-H groups."

TRAIN FOR AGINDUSTRY?

Is their need for providing technical agricultural training, through public education, for individuals who wish to enter, or who are already employed in the non-farming agricultural occupations? The answer to this question is the object of a nine-county survey now being conducted in the vicinity of Wilson and Goldsboro, North Carolina, J. H. Blackmon and C. G. Dawson reported in a recent North Carolina *Ag Ed News*.

The survey, being conducted by the Division of Vocational Education, has been under way since November 23. Vocational argiculture teachers in the nine county area of Wilson, Pitt, Nash, Edgecombe, Greene, Wayne, Duplin, Sampson and Johnson are assisting.

A preliminary tabulation of the Wilson area (Wilson, Nash, Pitt, Edgecombe and Greene Counties) includes information from 120 agricultural business firms, 397 high school senior boys and 33 former vo-ag students.

It indicates that the 120 firms will need 472 new or replacement personnel this year, and that management wants technical training for 425 of their employees.

The high school senior boys' survey showed that 156 of the 397 boys queried feel a need for further training. They are boys who do not plan to attend college. Ninety-three of the 156 boys indicated that they would be interested in attending a training program for non-farm agricultural occupations.

Thirty-one of the 33 former vo-ag students expressed interest in attending a training program for non-farm agricultural occupations.

Leon A. Mayer (center), Teutopolis High School vo-ag teacher, and Andrew Marcec, Bloomington, assistant personnel director of the Illinois Agricultural Association, are shown receiving alumni achievement awards from Edward L. Voils, president of the Southern Illinois University agriculture student advisory council. Mayer, a 1951 SIU graduate, is a native of Troy, Ill., and formerly taught at Aviston High School. Voils is preparing to teach vocational agriculture. Presentations were made at the annual All-Agriculture dinner at SIU in March.

Night after night, seven of the people shown above drove 60 miles round-trip to attend classes on farm accounting and income tax in Council, Idaho. So one Saturday, the teacher, Fred Beckman, vo-ag instructor at Council High School, brought the class to them. He drove out to their community, Bear, and held a class in their little one room school house. Beckman is sitting next to the stove in the photo above, taken by his wife, who wrote-up the incident for the *Weiser American*.

booklet-bulletin reviews

Publications listed are furnished free of charge to readers of County Agent & Vo-Ag Teacher. Just circle the number of the literature you want on the Service Cards, print or type your name, position, and address, clip and send. Service cards are on pages 11 and 27.

Audio-Visual Aids

108—PROJECTION GUIDE

A fully illustrated A-V Projection Guide is being offered by Radiant Manufacturing Co., manufacturers of projection screens. The guide covers silent and sound motion picture projection as well as slide, slide-film, opaque and overhead projection for all types of users. For your free copy and information on the company's complete line of projection screens,

CIRCLE 108 ON SERVICE CARD

109—AUDIO-VISUAL IDEAS

Kalart Company, Inc., has published a new edition of their booklet, *Treasure Chest of Audio-Visual Ideas*, which presents the latest information on the effective use of films in audio-visual education. If you would like a copy, just

CIRCLE 109 ON SERVICE CARD

110—FILM CATALOG

Free films available for loan to school and adult groups in 1961 are described in a new catalog being offered by Modern Talking Picture Service. The catalog describes more than 350 films, most of which are in color. For your copy of *Pocket Guide to Free Films*,

CIRCLE 110 ON SERVICE CARD

Chemicals

111—UNDERWATER WEED CONTROL

In just a few days Aquathol can clear ponds and lakes of troublesome underwater weeds without harm to fish or other water life. It is easy to apply and leaves water safe for domestic and recreation uses. If you would like more information about Pennsalt Chemical Corp.'s underwater weed killer,

CIRCLE 111 ON SERVICE CARD

Crops and Soils

112—VEGETABLE GROWERS GUIDE

The 1961 illustrated edition of *Commercial Growers Guide* has been published by Seed Research Specialists, Inc. This year's edition includes varietal descriptions, planting instructions, growing habits, maturity schedules and recommended use for all available vegetable varieties. Information on insect and disease control, soil deficiency and a planting chart are also included. For your copy,

CIRCLE 112 ON SERVICE CARD

Irrigation

113—SPRINKLER IRRIGATION

National Rain Bird Sales & Eng. Corp. and Rainy Sprinkler Sales would like to send you the latest engineering data on Rain Bird sprinklers. Engineered to meet specific irrigation requirements, Rain Birds are known for their dependability and trouble-free operation. If you would like to receive literature,

CIRCLE 113 ON SERVICE CARD

Livestock & Poultry

114—PASTURE PAYS OFF

Research studies which show how livestock feeding on pasture gives extra profits are being offered in book form by Keystone Steel & Wire Company in their new publication, *Pasture—How to Reduce Feed Costs*. The book also tells how to renovate pasture. For your free copy,

CIRCLE 114 ON SERVICE CARD

115—PREVENT BLACKHEAD

If you would like to learn how to protect turkeys against blackhead disease, you'll be interested in literature being offered by Dr. Salsbury's Laboratories on Histostat-50. This blackhead preventive is mixed in the ration when birds go on the range, or earlier if there has been blackhead disease in the brooder house. Literature will be sent to you if you

CIRCLE 115 ON SERVICE CARD

116—LIVESTOCK MARKING

Salt Lake Stamp Co. will be happy to send you their free, full color catalog on livestock marking devices. Tags are available in five colors, four numbers and 1⅝" size. For your catalog,

CIRCLE 116 ON SERVICE CARD

Tractors & Equipment

117—SPRAY NOZZLES

Farm spraying can be improved by getting better performance, easier installation and better control with Spraying Systems Co.'s spray nozzles. Most components are available in choice of brass, aluminum, nylon and stainless steel. If you would like to receive a catalog,

CIRCLE 117 ON SERVICE CARD

118—FARM TRACTORS

A new brochure detailing the record-breaking performances of two new farm tractors in University of Nebraska tests last October is now available from Oliver Corporation. The brochure gives complete test reports on how the new Oliver 1800 broke existing records in pulling power and fuel economy and how the new Oliver 1900 diesel tractor set a new horsepower record. For a copy of the brochure,

CIRCLE 118 ON SERVICE CARD

119—AIRCROP SPRAYERS

John Bean Division of Food Machinery & Chemical Corp. is offering a new 16-page catalog on their full line of Aircrop sprayers. The catalog lists specifications and illustrates two sprayers which are complete with spray tank, pump and air handling unit, plus three Aircrop attachments that convert high pressure sprayers into air-type units. For your copy,

CIRCLE 119 ON SERVICE CARD

120—AGRICULTURAL HANDBOOK

The latest addition to the Ford farm booklet library is *Ford Guide to Profit-Making Decisions*. In this booklet are answers to such questions as the best time to plant, amounts of fertilizer to use for specific crop applications, how trucks help increase materials handling efficiency, when to expect the seasonal price peak on cattle. Here are dozens of charts, graphs and how-to-do-it ideas. If you'd like a copy of the booklet, just

CIRCLE 120 ON SERVICE CARD

121—TRAXCAVATORS

A behind-the-scenes account of the development of Caterpillar's line of wheel-type Traxcavators and owners' reactions to the new units are described in a booklet released by Caterpillar Tractor Co. Entitled *Success Story on Wheels*, the 8-page illustrated booklet also shows the wheel loaders at work in various parts of the country and tells the uses to which owners have put them. For your copy,

CIRCLE 121 ON SERVICE CARD

Miscellaneous

122—FARM LEVEL

Bostrom-Brady Mfg. Co. would like to send literature on their No. 2 farm level with 12-power telescope, which can be used for terracing, ditching irrigating, grading, tile draining, running lines, etc. Directions are given in a booklet which is included with each instrument. The company also offers a No. 4 Contractors' level and a No. 5 Convertible level with 16-power telescopes. Literature will be sent to you if you

CIRCLE 122 ON SERVICE CARD

New Products

(See page 32)

123—Mechanical Teacher

124—"Closed-System" Applicator

125—Gem of a Gate

126—Better Spreader

A Pictorial Series on How to Judge Cattle . . . Sheep . . . Hogs

Listed below are reprints of articles which have appeared in COUNTY AGENT & VO-AG TEACHER and which are available at 5 cents each.

Text accompanying the excellent pictures evaluates the conformation of the animals shown.

Angus heifers
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new ideas and products

MECHANICAL TEACHER

The Koncept-O-Graph, pictured, is a new kind of teaching machine just introduced to the market. This unusual machine handles all forms of teaching programs including single printed sheets,

folded strip programs or the long roll style.

A turn of the knob moves the program past a 4 x 8-inch window and automatically feeds consecutive pages without interruption. The machine snaps open for inserting program sheets.

A detachable answer unit is included with all sample orders. This extra machine works in synchronization with the basic unit, and can be positioned for either right- or left-handed students.

More information about this interesting unit can be obtained by **circling 123** on service cards or write Koncept-O-Graph Corp., 179 Berkeley St., Rochester 7, N. Y.

"CLOSED-SYSTEM" APPLICATOR

White plastic "stockings" that fit over the flexible feeder tubes are presented as an added safety feature of the 1961 Gandy row-crop granular chemical applicator. The manufacturer states that

the water- and air-tight plastic makes a totally closed system, confining fumes and dust from insecticides and herbicides and preventing entrance of moisture to tubes from those spring showers which occur so frequently during planting.

If you would like more information about this applicator, **circle 124** on service cards or write E. S. Gandrud, Gandy Company, 100 Gandrud Rd., Owatonna, Minn.

GEM OF A GATE

Rock-up adjustable height hinges and an automatic foolproof latch are features of a new farm gate just introduced by Behlen Manufacturing Company. The rock-up hinges allow easy raising of the gate to slide over high spots or other obstructions.

An adjustable lock collar permits setting the hinge at the desired height. The latch is loosened by a simple lever, will re-latch itself automatically from either direction and is easily padlocked.

Channel formed steel sections give

the gate tremendous strength combined with light weight. The gate is available in 12-, 14- or 16-foot lengths, all 4½ feet high.

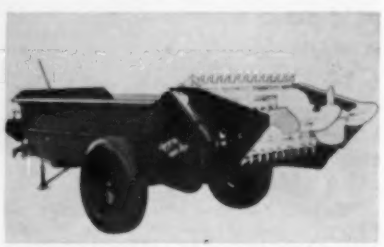
For more details, **circle 125** on service cards or write Mel Henning, of Behlen Manufacturing Company, Columbus, Neb.

BETTER SPREADER

Cobey Corporation has developed a new spreader designed specifically for handling chunky, compact manure. It has a widespread feature which assures a spread of finely shredded, evenly placed manure up to a 15-foot width.

This unit has six spreading speeds to control thickness of spread. It has single lever control which is within easy reach of the tractor seat.

The lower height of the unit makes for easier and faster mechanical loading from feed lots or under-barn cleaners. Last, but not least, this spreader



is guaranteed against corrosion because of its all-steel construction.

For further information, **circle 126** on service cards or write Cobey Corporation, Galion, Ohio.

Sounding Board

York

Dr. E. T. York, Jr., of Auburn, Ala., is new administrator of the Federal Extension Service. Since May 1959 Dr. York has served as director of the Alabama Extension Service.

A graduate of Auburn University, Dr. York is a recognized agricultural leader and a Fellow of the American Association for the Advancement of Science and the American Society of Agronomy.

In announcing Dr. York's appointment, Secretary of Agriculture Orville L. Freeman said greater emphasis is being placed upon leadership of the Cooperative Extension Service as the educational arm of USDA.

John Harms, Washington editor, and the editor of COUNTY AGENT & VO-AG TEACHER visited the new federal extension service administrator, Dr. E. T. York, in his spacious USDA office at press-time.

We had two major purposes in mind with this interview. First, to determine what new programs, if any, were being planned; second, what is the philosophy of the new administrator?

Q. Extension has been a terrific success in helping the *consumer*, but what has it done to increase farm income?

A. This leads us to consideration of Extension's basic goal. The average person looks upon Extension's primary mission as that of helping the farmer improve his economic position. If this is the case, I am afraid we must admit that we have been something less than successful.

Between 1947 and 1959, agriculture's realized net income declined some 38 per cent. During the same period our gross national product and disposable personal income almost doubled. Obviously, our efforts are not being reflected directly in increased farm income.

Q. What do you feel is Extension's greatest contribution then?

A. It seems to me that it has been that of accelerating our nation's economic growth.

Q. How do you define Extension's goal for the future?

A. It seems to me that we might benefit from past experiences and establish as Extension's primary mission that of *total economic development*. Programs in home economics, agriculture, and 4-H would be essential components of such a mission.

Furthermore, I would add that no other group has been chartered as the educational arm of the U. S. Department of Agriculture, or has been given the responsibility for the off-campus phases of education in agriculture and home economics within our land grant college system.

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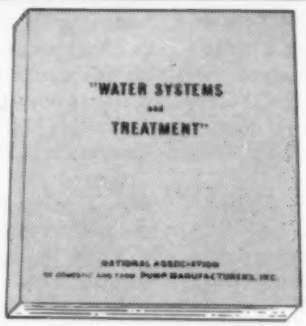

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in summing up

Beware of the academic trap!

COUNTY AGENTS whom I've come to know and respect seem to have several things in common. First, they are technically trained; second, they feel *inadequate* on subject matter.

Of course, this is typical of all types of service people. There just aren't enough hours in the day to study in one's chosen field . . . to stay *technically proficient!*

Farmers seem to get "smarter" every day—and more demanding. This is Agriculture, USA.

That's the reason extension people like to go back to school—to brush up on subject matter in order to be more closely identified with the *ideal ag leader* they've always held in their minds.

The mail that comes across my desk is full of evidence that county agents and other ag leaders are getting this technical help. Dedicated specialists in agronomy, horticulture, entomology, engineering and all the other vital areas are anxious to help. They have the know-how and are respected at their respective colleges, in industry and on farms.

It is distressing to note, however, that many administrators feel differently about the kind of "help" needed today by agricultural extension service employees.

I read a news release from a certain ag college a few days ago that makes me "wonder" about some of our administrators. Do they want county agents to be engaged in *agriculture* or just plain "busy work?"

"There are many reasons why agricultural extension employees continue to go back to school," the report said.

". . . none rank higher than a desire on the part of the extension worker to do a better job."

Now what does the "studies and training specialist" being quoted in this release think constitutes a "better job?"

Well, we must read on to determine this.

"Most extension workers are adequately trained in subject matter," the specialist is quoted as saying, "but in today's complex society that isn't enough."

Really? So what are the "vital" fields in which county agents should be well trained?

"Human relations and educational methods, communications, public relations and . . .

". . . economic and sociological problems are but a few of the fields in which extension workers are called upon for advice and leadership."

Whoa there! Now everyone knows that this magazine stands for such things as better communications and more emphasis on public relations—yes even more emphasis on economics and sociology.

But not at the expense of subject matter!

It's significant to me that *only the administrator* feels that the county agent is technically proficient. Ask any county agent and I'm sure he'll give you a straight answer about how well versed he is on all technical problems that arise in his job.

Yes, ask the county agent whom the writer quoted in his "What is Extension?" editorial in the March issue!

I say leave the social problems to the sociologist and the economic problems to the economist. That's what they're trained for. Just as soon as the county agent attempts to become all things to all people, he'll find himself in trouble.

The image of the county agent is magnificent! Why change it?

If you're planning to return to school for graduate study, you may be in for some surprises. I was told recently that extension methods, extension philosophy and extension administration are the "key subjects" these days at some institutions. So this is the "help" the farmer will be getting! Well, I'd like to go on record as saying that he couldn't care less about extension methods!

Thank goodness, all administrators are not agreed on this matter of what constitutes the most effective kind of training for county agents.

"In this highly competitive age, an administrator from Auburn University points out in "Speak Up" (page 6) this month, farmers are going to "DEMAND more technical proficiency on the part of those who contact them."

I took the liberty of placing the word *demand* in capital letters.

When did opportunism start replacing logic in extension administration?

It doesn't seem to me that many of our administrators have much faith in today's agriculture. They seem to be trying to move away from their responsibilities, rather than facing them squarely.

Extension must constantly improve its methods of reaching the farmer. County agents must try to understand the *whole man*—yes, the whole family, as was pointed out in last month's article, "Let's Take a Look at the Family Approach."

But you must also be careful not to fall into the "academic trap" that is being set for you in our ag colleges! Your farmers just won't buy it!

Gordon L. Berg
Editor

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SERPASIL® (reserpine) is the only available medicament that acts directly on the sympathetic nervous system.[1] Incorporated in SERPASIL Premix, this active agent actually shields birds against the causes of stress—heat, cold, crowding, debeaking, vaccination, caging, and spraying.

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References: 1. Plummer, A., Gaunt, R., and Belloff, G.: CIBA Research Laboratories. 2. Couch, J. R.: First Conference on the Use of the Tranquilizing and Antihypertensive Agent SERPASIL in Animal and Poultry Production, College of Agriculture, Rutgers, The State University, New Brunswick, N. J., May 7, 1959. 3. Weiss, H. S.: Ibid. 4. Burger, R. E.: Ibid. 5. Gilbreath, J. C.: Ibid. 6. Parker, E. L.: Second Conference on the Use of Reserpine in Poultry Production, The Institute of Agriculture, University of Minnesota, St. Paul, Minn., May 6, 1960. 7. Ringer, R. K.: Ibid. 8. Waibel, P. E.: Ibid. 9. Morrison, W. D.: Ibid. 10. Carlson. C. W.: First Conference, etc.

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